

ATTACHMENT 5

Material Safety Data Sheets for Reviewed Riot Control Agent Products

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Military-Style Maximum Smoke HC Grenade
- **Article number:** 1083 (1011576)
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture:** Explosive product.
- **Uses advised against** Contact manufacturer.
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **Further information obtainable from:** Customer Care Department
- **1.4 Emergency telephone number:**
ChemTel Inc.
+1 (800)255-3924, +1 (813)248-0585



SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H400, H410.



exploding bomb

Expl. 1.4 H204 Fire or projection hazard.



health hazard

Carc. 2 H351 Suspected of causing cancer.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

- **Additional information:** 0 % of the mixture consists of component(s) of unknown toxicity.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

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· **Hazard pictograms**

This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS).



GHS01 GHS08 GHS09

· **Signal word** Warning· **Hazard-determining components of labelling:**

hexachloroethane

· **Hazard statements**

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H410.

H204 Fire or projection hazard.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P250 Do not subject to grinding/shock/friction.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P240 Ground/bond container and receiving equipment.

P373 DO NOT fight fire when fire reaches explosives.

P370+P380 In case of fire: Evacuate area.

P372 Explosion risk in case of fire.

P314 Get medical advice/attention if you feel unwell.

P401 Store in accordance with local/regional/national/international regulations.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

Can become highly flammable in use.

· **NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 3

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· HMIS-ratings (scale 0 - 4)

HEALTH	0	Health = *0
FIRE	0	Fire = 0
REACTIVITY	3	Reactivity = 3

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Explosive Product Notice**

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES - The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.

WARNING - All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 1314-13-2 EINECS: 215-222-5 Index number: 030-013-00-7	zinc oxide ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	25-50%
CAS: 67-72-1 EINECS: 200-666-4	hexachloroethane ⚠ Carc. 2, H351; STOT RE 2, H373	25-50%
CAS: 7429-90-5 EINECS: 231-072-3 Index number: 013-002-00-1	aluminium powder (stabilised) ⚠ Flam. Sol. 1, H228; Water-react. 2, H261	2,5-10%
CAS: 7757-79-1 EINECS: 231-818-8	potassium nitrate ⚠ Ox. Sol. 2, H272	≤ 2,5%
CAS: 7440-21-3 EINECS: 231-130-8	silicon ⚠ Flam. Sol. 2, H228	≤ 2,5%
CAS: 9004-70-0 EC number: 603-037-0	Nitrocellulose, colloided, granular ⚠ Expl. 1.1, H201	≤ 2,5%
CAS: 7429-90-5 EINECS: 231-072-3 Index number: 013-001-00-6	aluminium powder (pyrophoric) ⚠ Pyr. Sol. 1, H250; Water-react. 2, H261	≤ 2,5%

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Additional information:

For the listed ingredient(s), the identity and exact percentages are being withheld as a trade secret.
For the wording of the listed Hazard Statements refer to section 16.

Notable Trace Components ($\leq 0,1\%$ w/w)

CAS: 592-87-0 EINECS: 209-774-6 Index number: 082-001-00-6	lead dithiocyanate ⚠ Repr. 1A, H360Df; STOT RE 2, H373 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332
CAS: 7758-97-6 EINECS: 231-846-0 Index number: 082-004-00-2	lead chromate ⚠ Carc. 1B, H350; Repr. 1A, H360Df; STOT RE 2, H373 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410
CAS: 10294-40-3 EINECS: 233-660-5 Index number: 056-002-00-7	barium chromate ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332

SECTION 4: First aid measures

4.1 Description of first aid measures

• **General information:** Immediately remove any clothing soiled by the product.

• **After inhalation:** Supply fresh air; consult doctor in case of complaints.

• **After skin contact:**

Immediately rinse with water.

If skin irritation is experienced, consult a doctor.

• **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

• **After swallowing:**

Unlikely route of exposure.

Do not induce vomiting; call for medical help immediately.

• **4.2 Most important symptoms and effects, both acute and delayed**

Blast injury if mishandled.

Coughing

Breathing difficulty

• **Hazards**

Danger of blast or crush-type injuries.

Danger of impaired breathing.

Suspected of causing cancer.

May cause damage to organs through prolonged or repeated exposure.

• **4.3 Indication of any immediate medical attention and special treatment needed**

Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

If medical advice is needed, have product container or label at hand.

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SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents:

Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.

· For safety reasons unsuitable extinguishing agents: None.

· 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

Product may explode if burned in confined space. Individual cartridges may explode. Mass explosion of many cartridges at once is unlikely.

· 5.3 Advice for firefighters

· Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

· Additional information

Eliminate all ignition sources if safe to do so.

Cool endangered receptacles with water spray.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions.

Individual devices will randomly explode. Will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. In unusual cases, shrapnel may be thrown from exploding devices under containment. See 2008 Emergency response Guidebook for further information.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTEL AT 1-800-255-3924. Spills of this material should be handled carefully. Do not subject materials to mechanical shock or extreme heat. A spill of this material will normally not require emergency response team capabilities.

Wear protective equipment. Keep unprotected persons away.

Remove persons from danger area.

Ensure adequate ventilation

Protect from heat.

Isolate area and prevent access.

· 6.2 Environmental precautions: No special measures required.

· 6.3 Methods and material for containment and cleaning up:

Pick up mechanically.

Dispose contaminated material as waste according to section 13.

Send for recovery or disposal in suitable receptacles.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only outdoors or in a well-ventilated area.

Handle with care. Avoid jolting, friction and impact.

Information about fire - and explosion protection:

Protect from heat.

Emergency cooling must be available in case of nearby fire.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Avoid storage near extreme heat, ignition sources or open flame.

Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from flammable substances.

Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see section 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

1314-13-2 zinc oxide

PEL (USA) Long-term value: 15* 5** mg/m³
*total dust **respirable fraction and fume

REL (USA) Short-term value: 10** mg/m³
Long-term value: 5* 5** mg/m³
Ceiling limit: 15* mg/m³
*dust only **fume

TLV (USA) Short-term value: 10* mg/m³
Long-term value: 2* mg/m³
*as respirable fraction

EL (Canada) Short-term value: 10 mg/m³
Long-term value: 2 mg/m³

EV (Canada) Short-term value: 10 mg/m³
Long-term value: 2 mg/m³
respirable

67-72-1 hexachloroethane

PEL (USA) Long-term value: 10 mg/m³, 1 ppm
Skin

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REL (USA)	Long-term value: 10 mg/m ³ , 1 ppm Skin; See Pocket Guide Apps. A and C
TLV (USA)	Long-term value: 9,7 mg/m ³ , 1 ppm Skin
EL (Canada)	Long-term value: 1 ppm Skin; IARC 2B
EV (Canada)	Long-term value: 1 ppm
7429-90-5 aluminium powder (stabilised)	
PEL (USA)	Long-term value: 15*; 5** mg/m ³ *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV (USA)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
EL (Canada)	Long-term value: 1,0 mg/m ³ respirable, as Al
EV (Canada)	Long-term value: 5 mg/m ³ aluminium-containing (as aluminium)
7440-21-3 silicon	
PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	TLV withdrawn
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust;**respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ total dust
7429-90-5 aluminium powder (pyrophoric)	
PEL (USA)	Long-term value: 15*; 5** mg/m ³ *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV (USA)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
EL (Canada)	Long-term value: 1,0 mg/m ³ respirable, as Al
EV (Canada)	Long-term value: 5 mg/m ³ aluminium-containing (as aluminium)

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.

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· 8.2 Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

· Respiratory protection:

Suitable respiratory protective device recommended.

Wear positive pressure NIOSH or European EN149 vapor respirators when deploying product in large quantities.

· Protection of hands:

Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Safety glasses

· Body protection: Protective work clothing

· Limitation and supervision of exposure into the environment

No further relevant information available.

· Risk management measures

See Section 7 for additional information.

Organizational measures should be in place for all activities involving this product.

No further relevant information available.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:

Solid metal container containing solid contents.

Colour:

According to product specification

· Odour:

Odourless

· Odour threshold:

Not determined.

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· pH-value:	Not applicable.
· Change in condition	
Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	Not determined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not determined.
· Auto/Self-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not self-igniting.
· Danger of explosion:	Heating may cause an explosion.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not applicable.
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water:	Insoluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Fire or projection hazard.
Toxic fumes may be released if heated above the decomposition point.
Reacts with strong acids and alkali.
Reacts violently with oxidising agents.
- **10.4 Conditions to avoid** Sources of ignition, open flame, incompatible materials.
- **10.5 Incompatible materials:** Oxidizers

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- **10.6 Hazardous decomposition products:**

Carbon monoxide and carbon dioxide
Nitrogen oxides
Sulphur oxides (SOx)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**

- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values relevant for classification:**

1314-13-2 zinc oxide
Oral LD50 > 5000 mg/kg (rat)

- **Primary irritant effect:**

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

- **Additional toxicological information:**

Normal handling of the undeployed product poses little or no health hazards, One should avoid inhalation by wearing appropriate respiratory protection when exposed to the chemical ingredients of the product above listed TLV's or when exposed to the post ignition by-products. This product is a canister which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. When the product is used, particles may be generated which may be irritating to the eyes and the respiratory tract.

Toxic and/or corrosive effects may be delayed up to 24 hours.

- **Acute effects (acute toxicity, irritation and corrosivity):** Danger of blast or crush-type injuries.

- **Repeated dose toxicity:** Possible risk of irreversible effects.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**

- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

- **Carcinogenicity**

Suspected of causing cancer.

- **Reproductive toxicity** Based on available data, the classification criteria are not met.

- **STOT-single exposure** Based on available data, the classification criteria are not met.

- **STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **12.2 Persistence and degradability** No further relevant information available.

- **12.3 Bioaccumulative potential** May be accumulated in organism

- **12.4 Mobility in soil** No further relevant information available.

- **Ecotoxicological effects:**

- **Remark:** Harmful to fish

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- **Additional ecological information:**
- **General notes:**
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
 - The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary
 - Harmful to aquatic organisms
 - Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
 - Must not be disposed together with household garbage. Do not allow product to reach sewage system.
 - After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.
 - The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|---------------------------------------|--|
| · 14.1 UN-Number | |
| · DOT, ADR, IMDG, IATA | UN0303 |
| · 14.2 UN proper shipping name | |
| · DOT | AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge |
| · ADR | 0303 AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, 0303 |
| · IMDG | AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, 0303, MARINE POLLUTANT |
| · IATA | AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, |

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· **14.3 Transport hazard class(es)**

· **DOT, IATA**



· **Class** 1.4
· **Label** 1.4G

· **ADR, IMDG**



· **Class** 1.4
· **Label** 1.4G

· **14.4 Packing group**

· **DOT, IMDG, IATA** Not Regulated

· **14.5 Environmental hazards:**

· **Marine pollutant:** No
Symbol (fish and tree)
· **Special marking (ADR):** Symbol (fish and tree)

· **14.6 Special precautions for user**

· **EMS Number:** Not applicable.
· **Segregation groups** F-B,S-X
Chlorates

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **IMDG**

· **Limited quantities (LQ)** 0
· **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity

· **UN "Model Regulation":**

UN 0303 AMMUNITION, SMOKE WITH OR WITHOUT BURSTER, EXPELLING CHARGE OR PROPELLING CHARGE, 0303, 1.4G, ENVIRONMENTALLY HAZARDOUS

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SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

· Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

1314-13-2	zinc oxide
67-72-1	hexachloroethane
7429-90-5	aluminium powder (stabilised)
7757-79-1	potassium nitrate

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65 (California):

· Chemicals known to cause cancer:

Present in trace quantities.

67-72-1	hexachloroethane
592-87-0	lead dithiocyanate
10294-40-3	barium chromate
7758-97-6	lead chromate

· Chemicals known to cause reproductive toxicity for females:

10294-40-3	barium chromate
7758-97-6	lead chromate

· Chemicals known to cause reproductive toxicity for males:

10294-40-3	barium chromate
7758-97-6	lead chromate

· Chemicals known to cause developmental toxicity:

Present in trace quantities.

10294-40-3	barium chromate
7758-97-6	lead chromate

· Carcinogenic Categories

· EPA (Environmental Protection Agency)

1314-13-2	zinc oxide	D, I, II
67-72-1	hexachloroethane	L

· IARC (International Agency for Research on Cancer)

67-72-1	hexachloroethane	2B
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· NIOSH-Ca (National Institute for Occupational Safety and Health)

67-72-1	hexachloroethane
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· Canada
· Canadian Domestic Substances List (DSL)

All ingredients are listed.

· Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients are listed.

· Canadian Ingredient Disclosure list (limit 1%)

1314-13-2 zinc oxide

67-72-1 hexachloroethane

7429-90-5 aluminium powder (stabilised)

· Directive 2012/18/EU
· Named dangerous substances - ANNEX I

None of the ingredients are listed.

· Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
· Other regulations, limitations and prohibitive regulations
· Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients are listed.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H201 Explosive; mass explosion hazard.

H228 Flammable solid.

H250 Catches fire spontaneously if exposed to air.

H261 In contact with water releases flammable gases.

H272 May intensify fire; oxidiser.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

DNEL: Derived No-Effect Level (REACH)

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Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

Trade name: Military-Style Maximum Smoke HC Grenade

(Cont'd. from page 14)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

Expl. 1.1: Explosives, Division 1.1

Expl. 1.4: Explosives, Division 1.4

Flam. Sol. 1: Flammable solids, Hazard Category 1

Flam. Sol. 2: Flammable solids, Hazard Category 2

Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1

Water-react. 2: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 2

Ox. Sol. 2: Oxidising Solids, Hazard Category 2

Carc. 2: Carcinogenicity, Hazard Category 2

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Sources

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com



Safety data sheet according to 1907/2006/EC

Page: 1/14

Printing date: July 16, 2016

Revision: July 16, 2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

· **Trade name:** Han-Ball™ Grenade, OC

· **Product code:** 1099 (1176034)

1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

· **Application of the substance / the mixture:** Explosive product.

· **Uses advised against:** Contact manufacturer.

1.3 Details of the supplier of the Safety Data Sheet

· **Manufacturer/Supplier:**

Safariland, LLC

13386 International Parkway

Jacksonville, FL 32218

Customer Care (800) 347-1200

· **Further information obtainable from:** Customer Care Department

1.4 Emergency telephone number:

ChemTel Inc.

(800)255-3924, +1 (813)248-0585

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

· **Classification according to Regulation (EC) No 1272/2008**

Expl. 1.4 H204 Fire or projection hazard.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

2.2 Label elements

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS01 GHS07

· **Signal word** Warning

· **Hazard-determining components of labelling:**

Capsaicin

· **Hazard statements**

H204 Fire or projection hazard.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

(Cont'd. on page 2)

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Trade name: Han-Ball™ Grenade, OC

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Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P250 Do not subject to grinding/shock/friction.
- P261 Avoid breathing dust.
- P264 Wash thoroughly after handling.
- P280 Wear protective gloves / eye protection / face protection.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P373 DO NOT fight fire when fire reaches explosives.
- P370+P380 In case of fire: Evacuate area.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P372 Explosion risk in case of fire.
- P401 Store in accordance with local/regional/national/international regulations.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.


2.3 Other hazards**Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.**Explosive Product Notice**

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES - The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.

WARNING - All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

SECTION 3: Composition/information on ingredients

3.2 Mixtures**Components:**

CAS: 100-21-0 EINECS: 202-830-0	terephthalic acid substance with a Community workplace exposure limit	10-20%
CAS: 9004-70-0 EC number: 603-037-0	Nitrocellulose, colloided, granular  Expl. 1.1, H201	10-20%

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Trade name: Han-Ball™ Grenade, OC

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CAS: 3811-04-9 EINECS: 223-289-7 Index number: 017-004-00-3	potassium chlorate Ox. Sol. 1, H271 Aquatic Chronic 2, H411 Acute Tox. 4, H302; Acute Tox. 4, H332	10-20%
CAS: 57-50-1 EINECS: 200-334-9	sucrose, pure substance with a Community workplace exposure limit	10-20%
CAS: 7757-79-1 EINECS: 231-818-8	potassium nitrate Ox. Sol. 2, H272	5-<10%
CAS: 546-93-0 EINECS: 208-915-9	Magnesium carbonate substance with a Community workplace exposure limit	5-<10%
CAS: 404-86-4 EINECS: 206-969-8	Capsaicin Acute Tox. 3, H301 Eye Dam. 1, H318 Skin Irrit. 2, H315; STOT SE 3, H335	5-<10%
CAS: 7440-21-3 EINECS: 231-130-8	silicon Flam. Sol. 2, H228	5-<10%
CAS: 7429-90-5 EINECS: 231-072-3 Index number: 013-001-00-6	aluminium powder (pyrophoric) Pyr. Sol. 1, H250; Water-react. 2, H261	1-2,5%
CAS: 10294-40-3 EINECS: 233-660-5 Index number: 056-002-00-7	barium chromate Acute Tox. 4, H302; Acute Tox. 4, H332	0,1-1%
CAS: 7439-96-5 EINECS: 231-105-1	manganese substance with a Community workplace exposure limit	0,1-1%
CAS: 7758-97-6 EINECS: 231-846-0 Index number: 082-004-00-2	lead chromate Carc. 1B, H350; Repr. 1A, H360Df; STOT RE 2, H373 Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0,1-<0,3%

• **SVHC**

7758-97-6 | lead chromate

• **Additional information:** For the wording of the listed Hazard Statements refer to section 16.

SECTION 4: First aid measures

• **4.1 Description of first aid measures**

• **General information:**

Immediately remove any clothing soiled by the product.
Take affected persons out into the fresh air.

• **After inhalation:**

Remove victim to fresh air.
Seek medical help for symptoms or if unconscious.

• **After skin contact:**

Brush off loose particles from skin.
If skin irritation continues, consult a doctor.

• **After eye contact:**

Remove contact lenses if worn.

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Trade name: Han-Ball™ Grenade, OC

(Cont'd. from page 3)

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**

Blast injury if mishandled.

May cause respiratory irritation.

Breathing difficulty

Coughing

Irritant to eyes.

Irritant to skin and mucous membranes.

· **Hazards:**

Danger of blast or crush-type injuries.

Danger of impaired breathing.

· **4.3 Indication of any immediate medical attention and special treatment needed**

Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

If necessary oxygen respiration treatment.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.

· **For safety reasons unsuitable extinguishing agents:** None.

· **5.2 Special hazards arising from the substance or mixture**

Fire or projection hazard.

During heating or in case of fire poisonous gases are produced.

Product may explode if burned in confined space. Individual cartridges may explode. Mass explosion of many cartridges at once is unlikely.

· **5.3 Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

· **Additional information:**

Eliminate all ignition sources if safe to do so.

Cool endangered receptacles with water spray.

Evacuate area and fight fire from the upwind side.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions.

Individual devices will randomly explode. Will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. In unusual cases, shrapnel may be thrown from exploding devices under containment. See 2008 Emergency response Guidebook for further information.

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SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTEL AT 1-800-255-3924. Spills of this material should be handled carefully. Do not subject materials to mechanical shock or extreme heat. A spill of this material will normally not require emergency response team capabilities.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective equipment. Keep unprotected persons away.

Remove persons from danger area.

Ensure adequate ventilation

Protect from heat.

Isolate area and prevent access.

· 6.2 Environmental precautions No special measures required.

· 6.3 Methods and material for containment and cleaning up

Pick up mechanically.

Dispose contaminated material as waste according to section 13.

Send for recovery or disposal in suitable receptacles.

Clean the affected area carefully; suitable cleaners are:

Warm water and cleansing agent

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Handle with care. Avoid jolting, friction and impact.

Use only in well ventilated areas.

· Information about fire - and explosion protection:

Protect from heat.

Keep respiratory protective device available.

Emergency cooling must be available in case of nearby fire.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· Requirements to be met by storerooms and receptacles:

Avoid storage near extreme heat, ignition sources or open flame.

· Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from flammable substances.

· Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.

· 7.3 Specific end use(s) No further relevant information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

100-21-0 terephthalic acid

AGW (Germany)	Long-term value: 5E mg/m ³ 2(I);Y, DFG
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57-50-1 sucrose, pure

WEL (Great Britain)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³
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546-93-0 Magnesium carbonate

WEL (Great Britain)	Long-term value: 10* 4** mg/m ³ *inhalable dust **respirable dust
---------------------	---

7440-21-3 silicon

WEL (Great Britain)	Long-term value: 10* 4** mg/m ³ *inhalable dust **respirable dust
---------------------	---

7429-90-5 aluminium powder (pyrophoric)

WEL (Great Britain)	Long-term value: 10* 4** mg/m ³ *inhalable dust **respirable dust
AGW (Germany)	Long-term value: 1,25* 10** mg/m ³ 2(II);*alveolengängig**eintembar; AGS, DFG

10294-40-3 barium chromate

WEL (Great Britain)	Long-term value: 0,05 mg/m ³ as Cr; Carc, Sen, BMGV
MAK (Germany)	eintembare Fraktion, vgl. Abschn. XII

7439-96-5 manganese

WEL (Great Britain)	Long-term value: 0,5 mg/m ³ as Mn
AGW (Germany)	Long-term value: 0,02A; 0,2E mg/m ³ 8(II);DFG,Y,10, 20

7758-97-6 lead chromate

IOELV (EU)	Long-term value: 2 mg/m ³ as Cr
WEL (Great Britain)	Long-term value: 0,05 mg/m ³ as Cr; Carc, Sen, BMGV
MAK (Germany)	eintembare Fraktion, vgl. Abschn. XII

· **DNELs:** No further relevant information available.

· **PNECs:** No further relevant information available.

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Trade name: Han-Ball™ Grenade, OC

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· **Ingredients with biological limit values:**

7429-90-5 aluminium powder (pyrophoric)

BGW (Germany)	200 µg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende Parameter: Aluminium
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10294-40-3 barium chromate

BMGV (Great Britain)	10 µmol/mol creatinine Medium: urine Sampling time: post shift Parameter: chromium
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7439-96-5 manganese

BGW (Germany)	20 µg/l Untersuchungsmaterial: Vollblut Probennahmezeitpunkt: bei Langzeitexposition: Nach mehreren vorangegangenen Schichten, Expositionsende bzw. Schichtende Parameter: Mangan
---------------	--

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.
Do not inhale dust / smoke / mist.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.

· **Respiratory protection:**

Wear positive pressure NIOSH or European EN149 vapor respirators when deploying product in large quantities.
Use suitable respiratory protective device when high concentrations are present.

· **Protection of hands:**



Protective gloves

Wear gloves when handling deployed rounds.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye protection:



Safety glasses

· Body protection: Protective work clothing

· Limitation and supervision of exposure into the environment:

No further relevant information available.

· Risk management measures:

See Section 7 for additional information.

Organizational measures should be in place for all activities involving this product.

No further relevant information available.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· Appearance

Form: Solid metal container containing liquid and solid contents.

Colour: According to product specification

· Odour: Odourless

· Odour threshold: Not determined.

· pH-value: Not applicable.

· Melting point/Melting range: Not determined.

· Boiling point/Boiling range: Not determined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not determined.

· Auto/Self-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Danger of explosion: Heating may cause an explosion.

· Explosion limits

Lower: Not determined.

Upper: Not determined.

· Vapour pressure: Not applicable.

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with water:

Insoluble.

· Partition coefficient (n-octanol/water): Not determined.

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- **Viscosity**
- Dynamic:** Not applicable.
- Kinematic:** Not applicable.
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Fire or projection hazard.
Toxic fumes may be released if heated above the decomposition point.
Contact with acids releases toxic gases.
Acts as an oxidising agent on organic materials such as wood, paper and fats.
Reacts with strong alkali.
- **10.4 Conditions to avoid** Sources of ignition, open flame, incompatible materials.
- **10.5 Incompatible materials** No further relevant information available.
- **10.6 Hazardous decomposition products**
Carbon monoxide and carbon dioxide
Nitrogen oxides
Sulphur oxides (SOx)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:** None.
- **Primary irritant effect**
- **Skin corrosion/irritation:**
Not a skin irritant in unused form. Vapors/particles from used product are possibly irritating to skin.
Causes skin irritation.
- **Serious eye damage/irritation:**
Not an eye irritant in unused form. Vapors/particles from deployed product are a serious eye irritant.
Causes serious eye irritation.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.

· IARC (International Agency for Research on Cancer):

10294-40-3 | barium chromate

1

- **Acute effects (acute toxicity, irritation and corrosivity):**
Danger of blast or crush-type injuries.
Irritating to eyes, respiratory system and skin.
- **Repeated dose toxicity:** From product as supplied: None.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

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- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:**
May cause respiratory irritation.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** The product contains materials that are harmful to the environment.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** May be accumulated in organism
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary
Harmful to aquatic organisms
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**

· DOT, ADR, IMDG, IATA

UN0301

· **14.2 UN proper shipping name**

· DOT, IMDG, IATA

AMMUNITION TEAR-PRODUCING with burster,
expelling
charge or propelling charge

0301 AMMUNITION TEAR-PRODUCING with
burster, expelling
charge or propelling charge

· ADR

· **14.3 Transport hazard class(es)**

· DOT



· Class

1.4

· Label

1.4G, 6.1, 8

· ADR



· Class

1.4 ()

· Label

1.4G+6.1+8

· IMDG



· Class

1.4

· Label

1.4G/6.1/8

· IATA



· Class

1.4

· Label

1.4G (6.1, 8)

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· 14.4 Packing group	
· DOT, ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· EMS Number:	F-B,S-Z
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· PHSMA EX #	EX2016020752
· ADR	
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· IMDG	
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· IATA	
	Cargo Aircraft Only.

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- Carcinogenic Categories

· IARC (International Agency for Research on Cancer)

10294-40-3	barium chromate	1
7758-97-6	lead chromate	1

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I potassium nitrate
- Seveso category P1b EXPLOSIVES
- Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- National regulations:
- Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

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Trade name: Han-Ball™ Grenade, OC

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· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

7758-97-6	lead chromate
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· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H201 Explosive; mass explosion hazard.
 H228 Flammable solid.
 H250 Catches fire spontaneously if exposed to air.
 H261 In contact with water releases flammable gases.
 H271 May cause fire or explosion; strong oxidiser.
 H272 May intensify fire; oxidiser.
 H301 Toxic if swallowed.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H332 Harmful if inhaled.
 H335 May cause respiratory irritation.
 H350 May cause cancer.
 H360Df May damage the unborn child. Suspected of damaging fertility.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 LDLo: Lowest Lethal Dose Observed
 Expl. 1.1: Explosives – Division 1.1
 Expl. 1.4: Explosives – Division 1.4
 Flam. Sol. 2: Flammable solids – Category 2
 Pyr. Sol. 1: Pyrophoric solids – Category 1
 Water-react. 2: Substances and mixtures which in contact with water emit flammable gases – Category 2
 Ox. Sol. 1: Oxidizing solids – Category 1

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Trade name: Han-Ball™ Grenade, OC

(Cont'd. from page 13)

Ox. Sol. 2: Oxidizing solids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Carc. 1B: Carcinogenicity – Category 1B
Repr. 1A: Reproductive toxicity – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Sources

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date July 30, 2014

Revision: July 30, 2014

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** 12-Gram Low Roll™ Non-Reloadable Distraction Device® with Safety Clip
- **Article number:** 8902NRSC (1150006)
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **Further information obtainable from:** Customer Care Department
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Classifications listed are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).



exploding bomb

Expl. 1.4 H204 Fire or projection hazard.

- **Additional information:**
There are no other hazards not otherwise classified that have been identified.
0 % of the mixture consists of component(s) of unknown toxicity.

-
- **2.2 Label elements**
 - **Labelling according to Regulation (EC) No 1272/2008**
The product is additionally classified and labelled according to the Globally Harmonized System within the United States (GHS).
The product is classified and labelled according to the CLP regulation.
 - **Hazard pictograms**



GHS01

- **Signal word** Warning
- **Hazard statements**
H204 Fire or projection hazard.

(Cont'd. on page 2)

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(Cont'd. from page 1)

• **Precautionary statements**

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P250 Do not subject to grinding/shock/friction.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P373 DO NOT fight fire when fire reaches explosives.
- P370+P380 In case of fire: Evacuate area.
- P372 Explosion risk in case of fire.
- P401 Store in accordance with local/regional/national/international regulations.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Additional information:**

Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.
Can become highly flammable in use.

• **NFPA ratings (scale 0 - 4)**



Health = 1
Fire = 0
Reactivity = 3

• **HMIS-ratings (scale 0 - 4)**



Health = 1
Fire = 0
Reactivity = 3

• **2.3 Other hazards**

• **Results of PBT and vPvB assessment**

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

• **Explosive Product Notice**

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES - The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.

WARNING - All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

SECTION 3: Composition/information on ingredients

• **3.2 Mixtures**

• **Description:** Mixture of substances listed below with nonhazardous additions.

(Cont'd. on page 3)

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(Cont'd. from page 2)

· Dangerous components:

CAS: 7778-74-7 EINECS: 231-912-9 Index number: 017-008-00-5	potassium perchlorate Ox. Sol. 1, H271 Acute Tox. 4, H302
CAS: 7429-90-5 EINECS: 231-072-3 Index number: 013-001-00-6	aluminium powder (pyrophoric) Pyr. Sol. 1, H250; Water-react. 2, H261
CAS: 7439-95-4 EINECS: 231-104-6 Index number: 012-001-00-3	magnesium powder (pyrophoric) Pyr. Sol. 1, H250; Water-react. 1, H260
CAS: 7440-50-8 EINECS: 231-159-6	copper substance with a Community workplace exposure limit
CAS: 7440-66-6	zinc metal Aquatic Acute 1, H400; Aquatic Chronic 1, H410
CAS: 3811-04-9 EINECS: 223-289-7 Index number: 017-004-00-3	potassium chlorate Ox. Sol. 1, H271 Aquatic Chronic 2, H411 Acute Tox. 4, H302; Acute Tox. 4, H332
CAS: 592-87-0 EINECS: 209-774-6 Index number: 082-001-00-6	lead dithiocyanate Carc. 1B, H350; Repr. 1A, H360Df; STOT RE 2, H373 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302; Acute Tox. 4, H332
CAS: 10294-40-3 EINECS: 233-660-5 Index number: 056-002-00-7	barium chromate Carc. 1A, H350 Acute Tox. 4, H302; Acute Tox. 4, H332

· Additional information:

For the listed ingredient(s), the identity and exact percentages are being withheld as a trade secret.

SECTION 4: First aid measures

· 4.1 Description of first aid measures
· General information:

This is a sealed unit that will not result in exposure to the contents under normal and reasonable conditions of use. In the unlikely event of exposure to contents, appropriate first aid should be administered.

Immediately remove any clothing soiled by the product.

· After inhalation:

Unlikely route of exposure.

Supply fresh air; consult doctor in case of complaints.

· After skin contact:

Generally the product does not irritate the skin.

Wash with soap and water.

If skin irritation is experienced, consult a doctor.

· After eye contact:

Remove contact lenses if worn.

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Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:**

Unlikely route of exposure.

Do not induce vomiting; call for medical help immediately.

- **4.2 Most important symptoms and effects, both acute and delayed** Blast injury if mishandled.

- **Hazards** Danger of blast or crush-type injuries.

- **4.3 Indication of any immediate medical attention and special treatment needed**

Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents:**

DO NOT fight fire when fire reaches explosives.

Use fire extinguishing methods suitable to surrounding conditions.

- **For safety reasons unsuitable extinguishing agents:** None.

- **5.2 Special hazards arising from the substance or mixture**

Product may explode if burned in confined space. Individual cartridges may explode. Mass explosion of many cartridges at once is unlikely.

- **5.3 Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

- **Additional information**

Eliminate all ignition sources if safe to do so.

Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions. Individual devices will randomly explode. Will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. In unusual cases, shrapnel may be thrown from exploding devices under containment. See 2008 Emergency response Guidebook for further information.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTEL AT 1-800-255-3924. Spills of this material should be handled carefully. Do not subject materials to mechanical shock or extreme heat. A spill of this material will normally not require emergency response team capabilities.

Remove persons from danger area.

Ensure adequate ventilation

Wear protective clothing.

Protect from heat.

Isolate area and prevent access.

- **6.2 Environmental precautions:** No special measures required.

- **6.3 Methods and material for containment and cleaning up:**

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

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· **6.4 Reference to other sections**

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

- Handle with care. Avoid jolting, friction and impact.
- Use only in well ventilated areas.
- Do not subject to grinding/shock/friction.
- **Information about fire - and explosion protection:**
- Protect from heat.
- Emergency cooling must be available in case of nearby fire.

· **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:**
- Store away from foodstuffs.
- Store away from flammable substances.
- **Further information about storage conditions:**
- Store in cool, dry conditions in well sealed receptacles.
- Keep away from heat.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see section 7.
- **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

7429-90-5 aluminium powder (pyrophoric)

PEL (USA)	Long-term value: 15*; 15** mg/m ³ *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV (USA)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
EL (Canada)	Long-term value: 1,0 mg/m ³ respirable, as Al
EV (Canada)	Long-term value: 5 mg/m ³ aluminium-containing (as aluminium)

(Cont'd. on page 6)

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7440-50-8 copper

PEL (USA)	Long-term value: 1* 0,1** mg/m ³ as Cu *dusts and mists **fume
REL (USA)	Long-term value: 1* 0,1** mg/m ³ as Cu *dusts and mists **fume
TLV (USA)	Long-term value: 1* 0,2** mg/m ³ *dusts and mists; **fume; as Cu
EL (Canada)	Long-term value: 1* 0,2** mg/m ³ *dusts and mists; **fume, as Cu
EV (Canada)	Long-term value: 0,2* 1** mg/m ³ as copper, *fume; **dust and mists

592-87-0 lead dithiocyanate

PEL (USA)	Long-term value: 5 mg/m ³ as CN; Skin
EV (Canada)	Long-term value: 0,05 mg/m ³ as Pb, Skin (organic compounds)

10294-40-3 barium chromate

PEL (USA)	Long-term value: 0,005* mg/m ³ Ceiling limit: 0,1** mg/m ³ *as Cr(VI) **as CrO ₃ ; see 29 CFR 1910,1026
REL (USA)	Long-term value: 0,0002 mg/m ³ as Cr; See Pocket Guide Apps. A and C
TLV (USA)	Long-term value: 0,01 mg/m ³ as Cr
EL (Canada)	Long-term value: 0,01 mg/m ³ as Cr; ACGIH A1, IARC 1

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.

Ingredients with biological limit values:
10294-40-3 barium chromate

BEI (USA)	25 µg/L Medium: urine Time: end of shift at end of workweek Parameter: Total chromium (fume)
	10 µg/L Medium: urine Time: increase during shift Parameter: Total chromium (fume)

- **Additional information:** No further relevant information available.

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8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Respiratory protection:

Not required under normal conditions of use.

Wear positive pressure NIOSH or European EN149 vapor respirators when deploying product in large quantities.

Protection of hands:

Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:



Safety glasses

Body protection: Protective work clothing

Limitation and supervision of exposure into the environment

No further relevant information available.

Risk management measures

Organizational measures should be in place for all activities involving this product.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:

Solid material

Colour:

According to product specification

Odour:

Odourless

Odour threshold:

Not determined.

pH-value:

Not applicable.

Change in condition

Melting point/Melting range:

Not Determined.

Boiling point/Boiling range:

Undetermined.

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- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Fire or projection hazard.
- **Auto/Self-ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Self-igniting:** Product is not self-igniting.
- **Danger of explosion:** Heating may cause an explosion.
- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Oxidising properties** Contains oxidizing agent.
- **Vapour pressure:** Not determined.
- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with water:** Variable, dependent upon product composition and packaging.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- **10.3 Possibility of hazardous reactions**
Fire or projection hazard.
Toxic fumes may be released if heated above the decomposition point.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Leadoxide vapour

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

This is a packaged product that will not result in exposure to the contents under normal conditions of use. In the event of exposure, administer first aid appropriate for symptoms present.

Acute toxicity

LD/LC50 values relevant for classification:

7758-97-6 lead chromate

Oral	LD50	12000 mg/kg (mouse)
------	------	---------------------

Primary irritant effect:

Skin corrosion/irritation

Not a skin irritant in unused form. Vapors/particles from used product are possibly irritating to skin.

Serious eye damage/irritation

Not an eye irritant in unused form. Vapors/particles from used product are possibly irritating to eyes.

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

Additional toxicological information:

Normal handling of the undeployed product poses little or no health hazards, One should avoid inhalation by wearing appropriate respiratory protection when exposed to the chemical ingredients of the product above listed TLV's or when exposed to the post ignition by-products. This product is a canister which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. When the product is used, particles may be generated which may be irritating to the eyes and the respiratory tract.

Acute effects (acute toxicity, irritation and corrosivity):

Danger of blast or crush-type injuries.

Repeated dose toxicity:

No further relevant information available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

May be accumulated in organism

12.4 Mobility in soil

No further relevant information available.

Additional ecological information:

General notes:

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary

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- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to local official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT, ADR, IMDG, IATA** UN0452
- **14.2 UN proper shipping name**
- **DOT** Grenades, Practice
- **ADR** 0452 GRENADES, PRACTICE
- **IMDG, IATA** GRENADES, PRACTICE
- **14.3 Transport hazard class(es)**
- **DOT**



- **Class** 1.4
- **Label** 1.4

-
- **ADR**
 - **Class** 1.4 (-)
 - **Label** 1.4G

-
- **IMDG, IATA**



- **Class** 1.4
- **Label** 1.4G

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- **14.4 Packing group** II
- **DOT, ADR, IMDG, IATA**
- **14.5 Environmental hazards:**
- **Special marking (IATA):** Prohibited from Transport in Passenger Aircraft.



Cargo Aircraft Only.

- **14.6 Special precautions for user** Not applicable.
 - **EMS Number:** F-B,S-X
 - **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
 - **Transport/Additional information:**
-
- **ADR**
 - **Limited quantities (LQ)** 0
 - **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity
 - **Transport category** 2
 - **Tunnel restriction code** E
 - **UN "Model Regulation":** UN0452, Grenades, Practice, 1.4, II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· Section 355 (extremely hazardous substances):
--

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):
--

7429-90-5	aluminium powder (pyrophoric)
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7440-50-8	copper
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7440-66-6	zinc metal
-----------	------------

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65 (California):

· Chemicals known to cause cancer:

592-87-0	lead dithiocyanate
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10294-40-3	barium chromate
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7758-97-6	lead chromate
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· Chemicals known to cause reproductive toxicity for females:
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10294-40-3	barium chromate
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7758-97-6	lead chromate
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· Chemicals known to cause reproductive toxicity for males:

10294-40-3 barium chromate

7758-97-6 lead chromate

· Chemicals known to cause developmental toxicity:

10294-40-3 barium chromate

7758-97-6 lead chromate

· Carcinogenic Categories
· EPA (Environmental Protection Agency)

7778-74-7 potassium perchlorate

NL

7440-50-8 copper

D

7440-66-6 zinc metal

D, I, II

10294-40-3 barium chromate

A(inh), D(oral), K/L(inh), CBD(oral)

· IARC (International Agency for Research on Cancer)

10294-40-3 barium chromate

1

· TLV (Threshold Limit Value established by ACGIH)

7429-90-5 aluminium powder (pyrophoric)

A4

10294-40-3 barium chromate

A1

· NIOSH-Ca (National Institute for Occupational Safety and Health)

10294-40-3 barium chromate

· Canada
· Canadian Domestic Substances List (DSL)

All ingredients are listed.

· Canadian Ingredient Disclosure list (limit 0.1%)

10294-40-3 barium chromate

· Canadian Ingredient Disclosure list (limit 1%)

7429-90-5 aluminium powder (pyrophoric)

7440-50-8 copper

· Directive 2012/18/EU
· Named dangerous substances - ANNEX I

None of the ingredients are listed.

None of the ingredients are listed.

· Other regulations, limitations and prohibitive regulations

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

· Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients are listed.

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- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- H250 Catches fire spontaneously if exposed to air.
- H260 In contact with water releases flammable gases which may ignite spontaneously.
- H261 In contact with water releases flammable gases.
- H271 May cause fire or explosion; strong oxidiser.
- H302 Harmful if swallowed.
- H332 Harmful if inhaled.
- H350 May cause cancer.
- H360Df May damage the unborn child. Suspected of damaging fertility.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.

· Abbreviations and acronyms:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- Expl. 1.4: Explosives, Division 1.4
- Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1
- Water-react. 1: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 1
- Water-react. 2: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 2
- Ox. Sol. 1: Oxidising Solids, Hazard Category 1
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Carc. 1A: Carcinogenicity, Hazard Category 1A
- Carc. 1B: Carcinogenicity, Hazard Category 1B
- Repr. 1A: Reproductive toxicity, Hazard Category 1A
- STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
- Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

(Cont'd. on page 14)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date July 30, 2014

Revision: July 30, 2014

Trade name: 12-Gram Low Roll™ Non-Reloadable Distraction Device® with Safety Clip

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

(Cont'd. from page 13)

• **Sources**

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Military-Style Smoke Grenade, Saf-Smoke™
- **Article number:** 1063 (1012504)
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture:** Explosive product.
- **Uses advised against** Contact manufacturer.
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **Further information obtainable from:** Customer Care Department
- **1.4 Emergency telephone number:**
ChemTel Inc.
+1 (800)255-3924, +1 (813)248-0585



SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.



exploding bomb

Expl. 1.4 H204 Fire or projection hazard.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Additional information:** 0 % of the mixture consists of component(s) of unknown toxicity.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS01

- **Signal word** Warning
- **Hazard statements**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.

(Cont'd. on page 2)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

Trade name: **Military-Style Smoke Grenade, Saf-Smoke™**

(Cont'd. from page 1)

H204 Fire or projection hazard.

H412 Harmful to aquatic life with long lasting effects.

- **Precautionary statements**

The following Precautionary Statements are applicable only to the general GHS regulations and not the specific CLP regulation: P374.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P250 Do not subject to grinding/shock/friction.

P280 Wear protective gloves / eye protection / face protection.

P370+P380+P375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

P374 Fight fire with normal precautions from a reasonable distance.

P372 Explosion risk in case of fire.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**

Can become highly flammable in use.

- **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 3

- **HMIS-ratings (scale 0 - 4)**



HEALTH 1 Health = 1

FIRE 0 Fire = 0

REACTIVITY 3 Reactivity = 3

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

- **Explosive Product Notice**

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES - The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.

WARNING - All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

(Cont'd. on page 3)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

Trade name: Military-Style Smoke Grenade, Saf-Smoke™

(Cont'd. from page 2)

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 100-21-0 EINECS: 202-830-0	terephthalic acid substance with a Community workplace exposure limit	25-50%
CAS: 9004-70-0 EC number: 603-037-0	Nitrocellulose, colloided, granular Expl. 1.1, H201	25-50%
CAS: 3811-04-9 EINECS: 223-289-7 Index number: 017-004-00-3	potassium chlorate Ox. Sol. 1, H271 Aquatic Chronic 2, H411 Acute Tox. 4, H302; Acute Tox. 4, H332	10-25%
CAS: 57-50-1 EINECS: 200-334-9	sucrose, pure substance with a Community workplace exposure limit	10-25%
CAS: 598-62-9 EINECS: 209-942-9	manganese carbonate substance with a Community workplace exposure limit	2,5-10%

Additional information:

For the listed ingredient(s), the identity and exact percentages are being withheld as a trade secret.
For the wording of the listed Hazard Statements refer to section 16.

Notable Trace Components (≤ 0,1% w/w)

CAS: 592-87-0 EINECS: 209-774-6 Index number: 082-001-00-6	lead dithiocyanate Repr. 1A, H360Df; STOT RE 2, H373 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302; Acute Tox. 4, H332
CAS: 7758-97-6 EINECS: 231-846-0 Index number: 082-004-00-2	lead chromate Carc. 1B, H350; Repr. 1A, H360Df; STOT RE 2, H373 Aquatic Acute 1, H400; Aquatic Chronic 1, H410
CAS: 10294-40-3 EINECS: 233-660-5 Index number: 056-002-00-7	barium chromate Acute Tox. 4, H302; Acute Tox. 4, H332

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:

Unlikely route of exposure.

Brush off loose particles from skin.

If skin irritation is experienced, consult a doctor.

After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Cont'd. on page 4)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

Trade name: Military-Style Smoke Grenade, Saf-Smoke™

(Cont'd. from page 3)

- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** Blast injury if mishandled.
- **Hazards** Danger of blast or crush-type injuries.
- **4.3 Indication of any immediate medical attention and special treatment needed**
Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
Product may explode if burned in confined space. Individual cartridges may explode. Mass explosion of many cartridges at once is unlikely.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Eliminate all ignition sources if safe to do so.
Cool endangered receptacles with water spray.
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions. Individual devices will randomly explode. Will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. In unusual cases, shrapnel may be thrown from exploding devices under containment. See 2008 Emergency response Guidebook for further information.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTEL AT 1-800-255-3924. Spills of this material should be handled carefully. Do not subject materials to mechanical shock or extreme heat. A spill of this material will normally not require emergency response team capabilities.
Wear protective equipment. Keep unprotected persons away.
Remove persons from danger area.
Ensure adequate ventilation
Protect from heat.
Isolate area and prevent access.
- **6.2 Environmental precautions:** No special measures required.
- **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Dispose contaminated material as waste according to section 13.
Send for recovery or disposal in suitable receptacles.

(Cont'd. on page 5)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

Trade name: Military-Style Smoke Grenade, Saf-Smoke™

(Cont'd. from page 4)

6.4 Reference to other sections

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Use only outdoors or in a well-ventilated area.
- Handle with care. Avoid jolting, friction and impact.

Information about fire - and explosion protection:

- Protect from heat.
- Emergency cooling must be available in case of nearby fire.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

- Avoid storage near extreme heat, ignition sources or open flame.

Information about storage in one common storage facility:

- Store away from foodstuffs.
- Store away from flammable substances.

Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see section 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

100-21-0 terephthalic acid

TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust; **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³

57-50-1 sucrose, pure

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust; **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ total dust

(Cont'd. on page 6)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

Trade name: **Military-Style Smoke Grenade, Saf-Smoke™**

(Cont'd. from page 5)

598-62-9 manganese carbonate

PEL (USA)	Ceiling limit: 5 mg/m ³ as Mn
REL (USA)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ as Mn
TLV (USA)	Long-term value: 0,02* 0,1* mg/m ³ as Mn; *respirable **inhalable fraction
EL (Canada)	Long-term value: 0,2 mg/m ³ as Mn; R

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.

· **8.2 Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

· **Protection of hands:**

Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Safety glasses

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment**
No further relevant information available.
- **Risk management measures**
See Section 7 for additional information.
Organizational measures should be in place for all activities involving this product.
No further relevant information available.

(Cont'd. on page 7)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

Trade name: Military-Style Smoke Grenade, Saf-Smoke™

(Cont'd. from page 6)

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Solid metal container containing solid contents.

Colour: According to product specification

· Odour: Odourless

· Odour threshold: Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/Melting range: Not determined.

Boiling point/Boiling range: Not determined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not determined.

· Auto/Self-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Self-igniting: Product is not self-igniting.

· Danger of explosion: Heating may cause an explosion.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapour pressure: Not applicable.

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with
water:

Insoluble.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· 9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity: No further relevant information available.

(Cont'd. on page 8)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

Trade name: Military-Style Smoke Grenade, Saf-Smoke™

(Cont'd. from page 7)

- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Fire or projection hazard.
Toxic fumes may be released if heated above the decomposition point.
Reacts with strong acids and alkali.
Reacts violently with oxidising agents.
- **10.4 Conditions to avoid** Sources of ignition, open flame, incompatible materials.
- **10.5 Incompatible materials:** Oxidizers
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Nitrogen oxides
Sulphur oxides (SOx)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:
--

3811-04-9 potassium chlorate

Oral	LD50	1870 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Not a skin irritant in unused form. Vapors/particles from used product are possibly irritating to skin.
- **Serious eye damage/irritation**
Not an eye irritant in unused form. Vapors/particles from used product are possibly irritating to eyes.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
Normal handling of the undeployed product poses little or no health hazards, One should avoid inhalation by wearing appropriate respiratory protection when exposed to the chemical ingredients of the product above listed TLV's or when exposed to the post ignition by-products. This product is a canister which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. When the product is used, particles may be generated which may be irritating to the eyes and the respiratory tract.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

(Cont'd. on page 9)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

Trade name: Military-Style Smoke Grenade, Saf-Smoke™

(Cont'd. from page 8)

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** May be accumulated in organism
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary
Harmful to aquatic organisms
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.1 UN-Number · DOT, ADR, IMDG, IATA | <p>UN0303</p> |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · DOT | <p>AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge</p> |

(Cont'd. on page 10)

Safety Data Sheet


according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

Trade name: Military-Style Smoke Grenade, Saf-Smoke™

(Cont'd. from page 9)

· ADR	0303 AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, 0303
· IMDG, IATA	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge,
· 14.3 Transport hazard class(es)	
· DOT, ADR, IMDG, IATA	
	
· Class	1.4
· Label	1.4G
· 14.4 Packing group	
· DOT, ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· EMS Number:	F-B,S-X
· Segregation groups	Chlorates
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN0303, AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, 0303, 1.4G

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

· Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

598-62-9 | manganese carbonate

(Cont'd. on page 11)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

Trade name: Military-Style Smoke Grenade, Saf-Smoke™

(Cont'd. from page 10)

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**· **Chemicals known to cause cancer:**

Present in trace quantities.

592-87-0 | lead dithiocyanate

10294-40-3 | barium chromate

7758-97-6 | lead chromate

· **Chemicals known to cause reproductive toxicity for females:**

10294-40-3 | barium chromate

7758-97-6 | lead chromate

· **Chemicals known to cause reproductive toxicity for males:**

10294-40-3 | barium chromate

7758-97-6 | lead chromate

· **Chemicals known to cause developmental toxicity:**

Present in trace quantities.

10294-40-3 | barium chromate

7758-97-6 | lead chromate

· **Carcinogenic Categories**· **EPA (Environmental Protection Agency)**

598-62-9 | manganese carbonate

D

· **IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **Canada**· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

598-62-9 | manganese carbonate

· **Canadian Ingredient Disclosure list (limit 1%)**

100-21-0 | terephthalic acid

· **Directive 2012/18/EU**· **Named dangerous substances - ANNEX I**

None of the ingredients are listed.

· **Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t**

(Cont'd. on page 12)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date December 1, 2015

Revision: December 1, 2015

Trade name: Military-Style Smoke Grenade, Saf-Smoke™

(Cont'd. from page 11)

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H201 Explosive; mass explosion hazard.

H271 May cause fire or explosion; strong oxidiser.

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H411 Toxic to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

Expl. 1.1: Explosives, Division 1.1

Expl. 1.4: Explosives, Division 1.4

Ox. Sol. 1: Oxidising Solids, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

· **Sources**

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

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Website: www.chemtelinc.com

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date July 15, 2015

Revision: July 15, 2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
 - **Trade name:** Skat Shell® 40 mm Multiple Projectile Round, CS
 - **Article number:** 6172 (1012173)
 - **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
 - **Application of the substance / the mixture** Crowd Control Device
 - **Uses advised against** Contact manufacturer.
 - **1.3 Details of the supplier of the Safety Data Sheet**
 - **Manufacturer/Supplier:**
Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
 - **Further information obtainable from:** Customer Care Department
 - **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585
- Poison Control Centres:
In the United Kingdom: 844 892 0111
In Australia: 131126
In New Zealand: +0800 764 766



SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Classifications listed are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.



exploding bomb

Expl. 1.4 H204 Fire or projection hazard.



skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H331 Toxic if inhaled.



health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Acute Tox. 4 H312 Harmful in contact with skin.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2 H319 Causes serious eye irritation.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 STOT SE 3 H335 May cause respiratory irritation.

· **Additional information:**

There are no other hazards not otherwise classified that have been identified.
 0 % of the mixture consists of component(s) of unknown toxicity.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is additionally classified and labelled according to the Globally Harmonized System within the United States (GHS).

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS01 GHS06 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**

glycerol trinitrate / nitroglycerin
 [(2-chlorophenyl)methylene]malononitrile
 potassium perchlorate
 diphenylamine
 Rosin

· **Hazard statements**

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.

H204 Fire or projection hazard.
 H301+H331 Toxic if swallowed or if inhaled.
 H312 Harmful in contact with skin.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.
 H411 Toxic to aquatic life with long lasting effects.

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Precautionary statements

The following Precautionary Statements are applicable only to the general GHS regulations and not the specific CLP regulation: P374.

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P250 Do not subject to grinding/shock/friction.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P285 In case of inadequate ventilation wear respiratory protection.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P373 DO NOT fight fire when fire reaches explosives.
- P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
- P374 Fight fire with normal precautions from a reasonable distance.
- P372 Explosion risk in case of fire.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

Can become highly flammable in use.

NFPA ratings (scale 0 - 4)

HMIS-ratings (scale 0 - 4)

Warning: Contains lead salt(s). Long-term health hazard.



* - Indicates a long term health hazard from repeated or prolonged exposures.

HMIS Long Term Health Hazard Substances

7778-74-7	potassium perchlorate
122-39-4	diphenylamine
15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide

2.3 Other hazards
Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Explosive Product Notice

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES - The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.

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WARNING - All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description:

Product will contain various combinations of the following substances. Not all substances will be in each product.

Dangerous components:

CAS: 9004-70-0 EC number: 603-037-0	Nitrocellulose, colloided, granular Explosive 1.1, H201
CAS: 2698-41-1 EINECS: 220-278-9	[(2-chlorophenyl)methylene]malononitrile Acute Tox. 3, H301; Acute Tox. 2, H330 Resp. Sens. 1, H334 Aquatic Acute 1, H400 Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335
CAS: 55-63-0 EINECS: 200-240-8 Index number: 603-034-00-X	glycerol trinitrate / nitroglycerin Unst. Expl., H200 Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330 STOT RE 2, H373 Aquatic Chronic 2, H411 Flam. Liq. 2, H225
CAS: 7757-79-1 EINECS: 231-818-8	potassium nitrate Ox. Sol. 2, H272
CAS: 7778-74-7 EINECS: 231-912-9 Index number: 017-008-00-5	potassium perchlorate Ox. Sol. 1, H271 Acute Tox. 4, H302
CAS: 122-39-4 EINECS: 204-539-4 Index number: 612-026-00-5	diphenylamine Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 STOT RE 2, H373 Aquatic Acute 1, H400; Aquatic Chronic 1, H410
CAS: 85-98-3 EINECS: 201-645-2	1,3-diethyldiphenylurea Acute Tox. 4, H302 Aquatic Chronic 3, H412
CAS: 1309-48-4 EINECS: 215-171-9 Index number: 025-199-09-0	magnesium oxide substance with a Community workplace exposure limit

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CAS: 69012-64-2 EINECS: 273-761-1	Silica-Amorphous Silica fume substance with a Community workplace exposure limit
CAS: 7439-89-6 EINECS: 231-096-4	iron substance with a Community workplace exposure limit
CAS: 7440-50-8 EINECS: 231-159-6	copper substance with a Community workplace exposure limit
CAS: 7704-34-9 EINECS: 231-722-6 Index number: 016-094-00-1	sulfur ⚠ Skin Irrit. 2, H315
CAS: 1314-23-4 EINECS: 215-227-2	zirconium dioxide substance with a Community workplace exposure limit
CAS: 10022-31-8 EINECS: 233-020-5 Index number: 056-002-00-7	barium nitrate ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332

SVHC

15245-44-0 | lead 2,4,6-trinitro-m-phenylene dioxide

Additional information:

For the wording of the listed Hazard Statements refer to section 16.

For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.

Notable Trace Components (≤ 0,1% w/w)

CAS: 15245-44-0 EINECS: 239-290-0 Index number: 609-019-00-4	lead 2,4,6-trinitro-m-phenylene dioxide ⚠ Unst. Expl., H200 ⚠ Carc. 1B, H350; Repr. 1A, H360Df; STOT RE 2, H373 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332
CAS: 592-87-0 EINECS: 209-774-6 Index number: 082-001-00-6	lead dithiocyanate ⚠ Carc. 1B, H350; Repr. 1A, H360Df; STOT RE 2, H373 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332

SECTION 4: First aid measures

4.1 Description of first aid measures
General information:

Immediately remove any clothing soiled by the product.

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

Remove breathing equipment only after contaminated clothing have been completely removed.

After inhalation:

Remove victim to fresh air.

Seek immediate medical advice.

Provide oxygen treatment if affected person has difficulty breathing.

In case of irregular breathing or respiratory arrest provide artificial respiration.

After skin contact:

Immediately remove any clothing soiled by the product.

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Brush off loose particles from skin.

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**

Asthma attacks

Blast injury if mishandled.

Allergic reactions

May cause respiratory irritation.

Breathing difficulty

Coughing

Irritant to eyes.

Irritant to skin and mucous membranes.

· **Hazards**

Danger of blast or crush-type injuries.

Harmful in contact with skin.

Danger of impaired breathing.

· **4.3 Indication of any immediate medical attention and special treatment needed**

Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

Contains [(2-chlorophenyl)methylene]malononitrile. May produce an allergic reaction.

Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.

In cases of irritation to the lungs, initial treatment with corticosteroid inhalants.

Monitor circulation, possible shock treatment.

Treat skin and mucous membrane with antihistamine and corticoid preparations.

If necessary oxygen respiration treatment.

Medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.

· **For safety reasons unsuitable extinguishing agents:** None.

· **5.2 Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

Product may explode if burned in confined space. Individual cartridges may explode. Mass explosion of many cartridges at once is unlikely.

· **5.3 Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

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· **Additional information**

Eliminate all ignition sources if safe to do so.
Cool endangered receptacles with water spray.
Evacuate area and fight fire from the upwind side.
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions.
Individual devices will randomly explode. Will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. In unusual cases, shrapnel may be thrown from exploding devices under containment. See 2008 Emergency response Guidebook for further information.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTEL AT 1-800-255-3924. Spills of this material should be handled carefully. Do not subject materials to mechanical shock or extreme heat. A spill of this material will normally not require emergency response team capabilities.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective equipment. Keep unprotected persons away.

Remove persons from danger area.

Ensure adequate ventilation

Protect from heat.

Isolate area and prevent access.

· **6.2 Environmental precautions:** No special measures required.

· **6.3 Methods and material for containment and cleaning up:**

Pick up mechanically.

Dispose contaminated material as waste according to section 13.

Send for recovery or disposal in suitable receptacles.

Clean the affected area carefully; suitable cleaners are:

Warm water and cleansing agent

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Handle with care. Avoid jolting, friction and impact.

Avoid breathing dust.

Use only in well ventilated areas.

· **Information about fire - and explosion protection:**

Protect from heat.

Keep respiratory protective device available.

Emergency cooling must be available in case of nearby fire.

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from flammable substances.
- **Further information about storage conditions:** Store in dry conditions.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see section 7.
- **8.1 Control parameters**

Ingredients with limit values that require monitoring at the workplace:
1309-48-4 magnesium oxide

PEL (USA)	Long-term value: 15* mg/m ³ fume; *total particulate
TLV (USA)	Long-term value: 10* mg/m ³ *as inhalable fraction
EL (Canada)	Short-term value: 10** mg/m ³ Long-term value: 10* 3** mg/m ³ *inhalable fume; **respirable dust and fume
EV (Canada)	Long-term value: 10 mg/m ³ inhalable

69012-64-2 Silica-Amorphous Silica fume

TLV (USA)	TLV withdrawn
EL (Canada)	Long-term value: 4* 1,5** mg/m ³ fume *total; **respirable
EV (Canada)	Long-term value: 2 mg/m ³ respirable

55-63-0 glycerol trinitrate / nitroglycerin

PEL (USA)	Ceiling limit: 2 mg/m ³ , 0,2 ppm Skin
REL (USA)	Short-term value: 0,1 mg/m ³ Skin
TLV (USA)	Long-term value: 0,46 mg/m ³ , 0,05 ppm Skin
EL (Canada)	Long-term value: 0,05 ppm Skin
EV (Canada)	Long-term value: 0,5 mg/m ³ , 0,05 ppm Skin

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2698-41-1 [(2-chlorophenyl)methylene]malononitrile

PEL (USA)	Long-term value: 0,4 mg/m ³ , 0,05 ppm
REL (USA)	Ceiling limit: 0,4 mg/m ³ , 0,05 ppm Skin
TLV (USA)	Ceiling limit: 0,39 mg/m ³ , 0,05 ppm Skin
EL (Canada)	Ceiling limit: 0,05 ppm Skin
EV (Canada)	Ceiling limit: 0,4 mg/m ³ , 0,05 ppm Skin

7439-89-6 iron

EV (Canada)	Long-term value: 1* 5** mg/m ³ as iron; *salts, water-soluble; **welding fume
-------------	---

7440-50-8 copper

PEL (USA)	Long-term value: 1* 0,1** mg/m ³ as Cu *dusts and mists **fume
REL (USA)	Long-term value: 1* 0,1** mg/m ³ as Cu *dusts and mists **fume
TLV (USA)	Long-term value: 1* 0,2** mg/m ³ *dusts and mists; **fume; as Cu
EL (Canada)	Long-term value: 1* 0,2** mg/m ³ *dusts and mists; **fume, as Cu
EV (Canada)	Long-term value: 0,2* 1** mg/m ³ as copper, *fume; **dust and mists

1314-23-4 zirconium dioxide

PEL (USA)	Long-term value: 5 mg/m ³ as Zr
REL (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
TLV (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
EL (Canada)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr

8050-09-7 Rosin

TLV (USA)	DSEN, RSEN, L
EL (Canada)	S

122-39-4 diphenylamine

REL (USA)	Long-term value: 10 mg/m ³
TLV (USA)	Long-term value: 10 mg/m ³

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EL (Canada)	Long-term value: 10 mg/m ³
EV (Canada)	Long-term value: 10 mg/m ³
15245-44-0 lead 2,4,6-trinitro-m-phenylene dioxide	
EV (Canada)	Long-term value: 0,05 mg/m ³ as Pb, Skin (organic compounds)
10022-31-8 barium nitrate	
IOELV (EU)	Long-term value: 0,5 mg/m ³ as Ba
PEL (USA)	Long-term value: 0,5 mg/m ³ as Ba
REL (USA)	Long-term value: 0,5 mg/m ³ as Ba
TLV (USA)	Long-term value: 0,5 mg/m ³ as Ba
EL (Canada)	Long-term value: 0,5 mg/m ³ as Ba
1345-04-6 antimony sulphide	
PEL (USA)	Long-term value: 0,5 mg/m ³ as Sb
REL (USA)	Long-term value: 0,5 mg/m ³ as Sb
TLV (USA)	Long-term value: 0,5 mg/m ³ as Sb
EL (Canada)	Long-term value: 0,5 mg/m ³ as Sb

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.

• 8.2 Exposure controls

- **Engineering measures** Provide adequate ventilation.

• Personal protective equipment:

• General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.
Immediately remove all soiled and contaminated clothing.
Do not inhale dust / smoke / mist.
Avoid contact with the eyes and skin.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.

• Respiratory protection:



Respiratory protection required.

Wear positive pressure NIOSH or European EN149 vapor respirators when deploying product in large quantities.

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· **Protection of hands:**



Protective gloves

Wear gloves when handling deployed rounds.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Safety glasses

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

No further relevant information available.

· **Risk management measures**

See Section 7 for additional information.

Organizational measures should be in place for all activities involving this product.

No further relevant information available.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:

Solid metal container containing liquid and solid contents.

Colour:

According to product specification

· **Odour:**

Odourless

· **Odour threshold:**

Not determined.

· **pH-value:**

Not applicable.

· **Change in condition**

Melting point/Melting range:

Not Determined.

Boiling point/Boiling range:

Undetermined.

· **Flash point:**

Not applicable.

· **Flammability (solid, gaseous):**

Not determined.

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- **Auto/Self-ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Self-igniting:** Product is not self-igniting.
- **Danger of explosion:** Heating may cause an explosion.
- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapour pressure:** Not applicable.
- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
 Danger of explosion.
 Toxic fumes may be released if heated above the decomposition point.
 Contact with acids releases toxic gases.
 Acts as an oxidising agent on organic materials such as wood, paper and fats.
 Reacts with strong alkali.
- **10.4 Conditions to avoid** Sources of ignition, open flame, incompatible materials.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
 Carbon monoxide and carbon dioxide
 Nitrogen oxides
 Sulphur oxides (SO_x)

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Toxic if swallowed or if inhaled.

Harmful in contact with skin.

LD/LC50 values relevant for classification:

55-63-0 glycerol trinitrate / nitroglycerin

Oral	LD50	115 mg/kg (mouse)
		105 mg/kg (rat)
Dermal	LD50	29 mg/kg (rat)
		280 mg/kg (rabbit)

2698-41-1 [(2-chlorophenyl)methylene]malononitrile

Oral	LD50	178 mg/kg (rat)
------	------	-----------------

122-39-4 diphenylamine

Oral	LD50	1120 mg/kg (rat)
------	------	------------------

15245-44-0 lead 2,4,6-trinitro-m-phenylene dioxide

Oral	LD50	650 mg/kg (rat)
------	------	-----------------

Primary irritant effect:

Effects based on exposure to dusts/mists/spray/vapours released during deployment. Unused product does not possess these effects.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Additional toxicological information:

Normal handling of the undeployed product poses little or no health hazards, One should avoid inhalation by wearing appropriate respiratory protection when exposed to the chemical ingredients of the product above listed TLV's or when exposed to the post ignition by-products. This product is a canister which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. When the product is used, particles may be generated which may be irritating to the eyes and the respiratory tract.

Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.

Acute effects (acute toxicity, irritation and corrosivity):

Irritating to eyes, respiratory system and skin.

Inhalation may cause irritation to the respiratory system.

Repeated dose toxicity:

May cause damage to organs through prolonged or repeated exposure.

Repeated exposures may result in skin and/or respiratory sensitivity.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

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- **Reproductive toxicity**
Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure**
Based on available data, the classification criteria are not met.
- **Aspiration hazard**
Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
The product contains materials that are harmful to the environment.

2698-41-1 [(2-chlorophenyl)methylene]malononitrile

EC50	0,2-0,3 mg/kg (Oncorhynchus mykiss)
	96 H

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** May be accumulated in organism
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary
Harmful to aquatic organisms
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to local official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT, ADR, IMDG, IATA**
- **14.2 UN proper shipping name**
- **DOT, IMDG, IATA**
- **ADR**
- **14.3 Transport hazard class(es)**
- **DOT**
- 
- **Class**
- **Label**
- **ADR, IMDG**
- 
- **Class**
- **Label**
- **IATA**
- 
- **Class**
- **Label**
- **14.4 Packing group**
- **DOT, ADR, IMDG, IATA**
- **14.5 Environmental hazards:**
- **Marine pollutant:**
- **Special marking (IATA):**
- 
- **14.6 Special precautions for user**
- **EMS Number:**

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- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**
- **UN "Model Regulation":**

Not applicable.
UN0301, Ammunition Tear-producing with burster, expelling charge or propelling charge, 1.4G (6.1+8), II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

7757-79-1	potassium nitrate
55-63-0	glycerol trinitrate / nitroglycerin
7440-50-8	copper
7440-66-6	zinc metal

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

Present in trace quantities.

15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide
592-87-0	lead dithiocyanate

· **Chemicals known to cause reproductive toxicity for females:**

Present in trace quantities.

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

Present in trace quantities.

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

Present in trace quantities.

15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide
592-87-0	lead dithiocyanate

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

7440-50-8	copper	D
7778-74-7	potassium perchlorate	NL
7440-66-6	zinc metal	D, I, II
10022-31-8	barium nitrate	D, CBD(inh), NL(oral)

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· **IARC (International Agency for Research on Cancer)**

69012-64-2	Silica-Amorphous Silica fume	3
7631-86-9	silicon dioxide	3
1345-04-6	antimony sulphide	3

· **TLV (Threshold Limit Value established by ACGIH)**

1309-48-4	magnesium oxide	A4
2698-41-1	[(2-chlorophenyl)methylene]malononitrile	A4
1314-23-4	zirconium dioxide	A4
122-39-4	diphenylamine	A4
10022-31-8	barium nitrate	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

122-39-4	diphenylamine
----------	---------------

· **Canadian Ingredient Disclosure list (limit 1%)**

1309-48-4	magnesium oxide
2698-41-1	[(2-chlorophenyl)methylene]malononitrile
7440-50-8	copper

· **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

· **Substances of very high concern (SVHC) according to REACH, Article 57**

15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide
------------	---

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H200 Unstable explosives.
H201 Explosive; mass explosion hazard.
H225 Highly flammable liquid and vapour.
H271 May cause fire or explosion; strong oxidiser.
H272 May intensify fire; oxidiser.
H300 Fatal if swallowed.
H301 Toxic if swallowed.
H302 Harmful if swallowed.

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H310 Fatal in contact with skin.
 H311 Toxic in contact with skin.
 H312 Harmful in contact with skin.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H330 Fatal if inhaled.
 H331 Toxic if inhaled.
 H332 Harmful if inhaled.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335 May cause respiratory irritation.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.
 H412 Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 Expl. 1.1: Explosives, Division 1.1
 Expl. 1.4: Explosives, Division 1.4
 Unst. Expl.: Explosives, Unstable explosives
 Flam. Liq. 2: Flammable liquids, Hazard Category 2
 Ox. Sol. 1: Oxidising Solids, Hazard Category 1
 Ox. Sol. 2: Oxidising Solids, Hazard Category 2
 Acute Tox. 3: Acute toxicity, Hazard Category 3
 Acute Tox. 1: Acute toxicity, Hazard Category 1
 Acute Tox. 4: Acute toxicity, Hazard Category 4
 Acute Tox. 2: Acute toxicity, Hazard Category 2
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
 Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
 STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
 Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
 Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
 Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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Sources

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com

Safety Data Sheet

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** 40mm Skat-Shell® Round, OC
- **Article number:** 6170
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Crowd Control Device
- **Uses advised against** Contact manufacturer.
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



exploding bomb

Expl. 1.4 H204 Fire or projection hazard.



Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2 H319 Causes serious eye irritation.
 STOT SE 3 H335 May cause respiratory irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Additional information:** 0 % of the mixture consists of component(s) of unknown toxicity.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



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• **Signal word** Warning

• **Hazard statements**

- H204 Fire or projection hazard.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H412 Harmful to aquatic life with long lasting effects.

• **Precautionary statements**

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P250 Do not subject to grinding/shock/friction.
- P261 Avoid breathing dust.
- P264 Wash thoroughly after handling.
- P280 Wear protective gloves / eye protection.
- P271 Use only outdoors or in a well-ventilated area.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P373 DO NOT fight fire when fire reaches explosives.
- P370+P380 In case of fire: Evacuate area.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P372 Explosion risk in case of fire.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P401 Store in accordance with local/regional/national/international regulations.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Additional information:**

- Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.
- Contains Rosin. May produce an allergic reaction.
- Can become highly flammable in use.

• **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 0
Reactivity = 3

The substance demonstrates unusual reactivity with water.

• **HMIS-ratings (scale 0 - 4)**



Health = 2
Fire = 0
Reactivity = 3

Warning: Contains lead salt(s). Long-term health hazard.

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- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Explosive Product Notice**

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES - The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.

WARNING - All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

SECTION 3: Composition/information on ingredients

• 3.2 Mixtures

• Description:

Product will contain various combinations of the following substances. Not all substances will be in each product.

Mixture of substances listed below with nonhazardous additions.

• Dangerous components:

CAS: 9004-70-0 EC number: 603-037-0	Nitrocellulose, colloided, granular Expl. 1.1, H201
CAS: 7757-79-1 EINECS: 231-818-8	potassium nitrate Ox. Sol. 2, H272
CAS: 1309-48-4 EINECS: 215-171-9 Index number: 025-199-09-0	magnesium oxide substance with a Community workplace exposure limit
CAS: 55-63-0 EINECS: 200-240-8 Index number: 603-034-00-X	glycerol trinitrate / nitroglycerin Unst. Expl., H200 Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330 STOT RE 2, H373 Aquatic Chronic 2, H411 Flam. Liq. 2, H225
CAS: 7778-74-7 EINECS: 231-912-9 Index number: 017-008-00-5	potassium perchlorate Ox. Sol. 1, H271 Acute Tox. 4, H302

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CAS: 7704-34-9 EINECS: 231-722-6 Index number: 016-094-00-1	sulfur ⚠ Skin Irrit. 2, H315
CAS: 85-98-3 EINECS: 201-645-2	1,3-diethyldiphenylurea ⚠ Acute Tox. 4, H302 Aquatic Chronic 3, H412
CAS: 7439-89-6 EINECS: 231-096-4	iron substance with a Community workplace exposure limit
CAS: 8050-09-7 EINECS: 232-475-7 Index number: 650-015-00-7	Rosin ⚠ Skin Sens. 1, H317
CAS: 122-39-4 EINECS: 204-539-4 Index number: 612-026-00-5	diphenylamine ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 ⚠ STOT RE 2, H373 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410
CAS: 7440-50-8 EINECS: 231-159-6	copper substance with a Community workplace exposure limit
CAS: 7440-66-6	zinc metal ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410
CAS: 69012-64-2 EINECS: 273-761-1	Silica-Amorphous Silica fume substance with a Community workplace exposure limit
CAS: 8023-77-6 EINECS: 288-920-0	Oleoresin Capsicum ⚠ Eye Dam. 1, H318 ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315

• **Additional information:**

For the listed ingredient(s), the identity and exact percentages are being withheld as a trade secret.
For the wording of the listed Hazard Statements refer to section 16.

• **Notable Trace Components (≤ 0,1% w/w)**

CAS: 15245-44-0 EINECS: 239-290-0 Index number: 609-019-00-4	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate ⚠ Unst. Expl., H200 ⚠ Carc. 1B, H350; Repr. 1A, H360Df; STOT RE 2, H373 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332
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SECTION 4: First aid measures

• **4.1 Description of first aid measures**

• **General information:**

Immediately remove any clothing soiled by the product.
Take affected persons out into the fresh air.

• **After inhalation:**

Remove victim to fresh air.
Seek medical help for symptoms or if unconscious.

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- **After skin contact:**
Brush off loose particles from skin.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
Blast injury if mishandled.
May cause respiratory irritation.
Coughing
Nausea
Dizziness
Cramp
Breathing difficulty
Irritant to skin and mucous membranes.
Irritant to eyes.
- **Hazards**
Danger of blast or crush-type injuries.
Danger of impaired breathing.
- **4.3 Indication of any immediate medical attention and special treatment needed**
If necessary oxygen respiration treatment.
Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
DO NOT fight fire when fire reaches explosives.
Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
Fire or projection hazard.
Formation of toxic gases is possible during heating or in case of fire.
Product may explode if burned in confined space. Individual cartridges may explode. Mass explosion of many cartridges at once is unlikely.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Eliminate all ignition sources if safe to do so.
Cool endangered receptacles with water spray.

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Evacuate area and fight fire from from the upwind side.

Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions. Individual devices will randomly explode. Will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. In unusual cases, shrapnel may be thrown from exploding devices under containment. See 2008 Emergency response Guidebook for further information.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTEL AT 1-800-255-3924. Spills of this material should be handled carefully. Do not subject materials to mechanical shock or extreme heat. A spill of this material will normally not require emergency response team capabilities.

Remove persons from danger area.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Protect from heat.

Keep away from ignition sources.

Isolate area and prevent access.

6.2 Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up:

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to section 13.

Do not flush with water or aqueous cleansing agents

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well ventilated areas.

Handle with care. Avoid jolting, friction and impact.

Information about fire - and explosion protection:

Protect from heat.

Keep respiratory protective device available.

Emergency cooling must be available in case of nearby fire.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Avoid storage near extreme heat, ignition sources or open flame.

Information about storage in one common storage facility:

Store away from foodstuffs.

Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

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· 7.3 Specific end use(s) No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see section 7.

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

1309-48-4 magnesium oxide

PEL (USA)	Long-term value: 15* mg/m ³ fume; *total particulate
TLV (USA)	Long-term value: 10* mg/m ³ *as inhalable fraction
EL (Canada)	Short-term value: 10** mg/m ³ Long-term value: 10* 3** mg/m ³ *inhalable fume; **respirable dust and fume
EV (Canada)	Long-term value: 10 mg/m ³ inhalable

55-63-0 glycerol trinitrate / nitroglycerin

PEL (USA)	Ceiling limit: 2 mg/m ³ , 0,2 ppm Skin
REL (USA)	Short-term value: 0,1 mg/m ³ Skin
TLV (USA)	Long-term value: 0,46 mg/m ³ , 0,05 ppm Skin
EL (Canada)	Long-term value: 0,05 ppm Skin
EV (Canada)	Long-term value: 0,5 mg/m ³ , 0,05 ppm Skin

7439-89-6 iron

EV (Canada)	Long-term value: 1* 5** mg/m ³ as iron; *salts, water-soluble; **welding fume
-------------	---

8050-09-7 Rosin

TLV (USA)	DSEN, RSEN, L
EL (Canada)	S

122-39-4 diphenylamine

REL (USA)	Long-term value: 10 mg/m ³
TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10 mg/m ³
EV (Canada)	Long-term value: 10 mg/m ³

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7440-50-8 copper

PEL (USA)	Long-term value: 1* 0,1** mg/m ³ as Cu *dusts and mists **fume
REL (USA)	Long-term value: 1* 0,1** mg/m ³ as Cu *dusts and mists **fume
TLV (USA)	Long-term value: 1* 0,2** mg/m ³ *dusts and mists; **fume; as Cu
EL (Canada)	Long-term value: 1* 0,2** mg/m ³ *dusts and mists; **fume, as Cu
EV (Canada)	Long-term value: 0,2* 1** mg/m ³ as copper, *fume; **dust and mists

69012-64-2 Silica-Amorphous Silica fume

TLV (USA)	TLV withdrawn
EL (Canada)	Long-term value: 4* 1,5** mg/m ³ fume *total; **respirable
EV (Canada)	Long-term value: 2 mg/m ³ respirable

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.

• **8.2 Exposure controls**• **Personal protective equipment:**• **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Do not inhale dust / smoke / mist.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

• **Respiratory protection:**

Wear positive pressure NIOSH or European EN149 vapor respirators when deploying product in large quantities.

• **Protection of hands:**

Protective gloves

Wear gloves when handling deployed rounds.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

• **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several

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Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date August 11, 2015

Revision: August 11, 2015

Trade name: 40mm Skat-Shell® Round, OC

(Cont'd. from page 8)

substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses

- **Limitation and supervision of exposure into the environment**

No special requirements.

No further relevant information available.

- **Risk management measures**

See Section 7 for additional information.

Organizational measures should be in place for all activities involving this product.

No further relevant information available.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Solid material

Colour: Dark grey

- **Odour:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value:** Not applicable.

- **Change in condition**

Melting point/Melting range: Not Determined.

Boiling point/Boiling range: Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Highly flammable.
Contact with water liberates extremely flammable gases.

- **Auto/Self-ignition temperature:** Not determined.

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Product is not self-igniting.

- **Danger of explosion:** Fire or projection hazard.

- **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

- **Vapour pressure:** Not applicable.

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- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Toxic fumes may be released if heated above the decomposition point.
Fire or projection hazard.
Reacts with strong acids and alkali.
Reacts violently with oxidising agents.
- **10.4 Conditions to avoid** Sources of ignition, open flame, incompatible materials.
- **10.5 Incompatible materials:** Oxidizers
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Nitrogen oxides
Sulphur oxides (SOx)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**

· LD/LC50 values relevant for classification:		
55-63-0 glycerol trinitrate / nitroglycerin		
Oral	LD50	115 mg/kg (mouse) 105 mg/kg (rat)
Dermal	LD50	29 mg/kg (rat) 280 mg/kg (rabbit)

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85-98-3 1,3-diethyldiphenylurea

Oral	LD50	780 mg/kg (rat, female) Female
------	------	-----------------------------------

122-39-4 diphenylamine

Oral	LD50	1120 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
Effects based on exposure to dusts/mists/spray/vapours released during deployment. Unused product does not possess these effects.
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Acute effects (acute toxicity, irritation and corrosivity):** Irritating to eyes, respiratory system and skin.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**
- **Germ cell mutagenicity**
Based on available data, the classification criteria are not met.
- **Carcinogenicity**
Based on available data, the classification criteria are not met.
- **Reproductive toxicity**
Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure**
Based on available data, the classification criteria are not met.
- **Aspiration hazard**
Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
The product contains materials that are harmful to the environment.

85-98-3 1,3-diethyldiphenylurea

LC50	15,6 mg/l (zebra fish)
------	------------------------

- **12.2 Persistence and degradability** The product is partially biodegradable. Significant residuals remain.
- **12.3 Bioaccumulative potential** May be accumulated in organism
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
This statement was deduced from the properties of the single components.
The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- **12.6 Other adverse effects** No further relevant information available.

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SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Must be specially treated adhering to official regulations.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to local official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**

- **DOT, ADR, IMDG, IATA**

UN0301

- **14.2 UN proper shipping name**

- **DOT, IMDG, IATA**

Ammunition Tear-producing with burster, expelling
charge or propelling charge

- **ADR**

0301 Ammunition Tear-producing with burster,
expelling
charge or propelling charge

- **14.3 Transport hazard class(es)**

- **DOT**



- **Class**

1.4

- **Label**

1.4G, 6.1, 8

- **ADR**



- **Class**

1.4

- **Label**

1.4G+6.1+8

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· **IMDG**

- Class 1.4
- Label 1.4/6.1/8

· **IATA**

- Class 1.4
- Label 1.4 (6.1, 8)
- 14.4 Packing group
- DOT, ADR, IMDG, IATA II
- 14.5 Environmental hazards:
- Marine pollutant: No
- 14.6 Special precautions for user Not applicable.
- EMS Number: F-A, S-Q
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.

· **Transport/Additional information:**

- ADR
- Tunnel restriction code D/E

· **IMDG**

- Limited quantities (LQ) 0
- Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 500 g
- UN "Model Regulation": UN0301, Ammunition Tear-producing with burster, expelling charge or propelling charge, 1.4G (6.1+8), II

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

7757-79-1 | potassium nitrate

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55-63-0 glycerol trinitrate / nitroglycerin

• **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

• **Proposition 65 (California):**

• **Chemicals known to cause cancer:**

Present in trace quantities.

15245-44-0 lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate

• **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

• **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

• **Chemicals known to cause developmental toxicity:**

Present in trace quantities.

15245-44-0 lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate

• **Carcinogenic Categories**

• **EPA (Environmental Protection Agency)**

7778-74-7 potassium perchlorate

NL

7440-50-8 copper

D

7440-66-6 zinc metal

D, I, II

• **IARC (International Agency for Research on Cancer)**

7631-86-9 silicon dioxide

3

69012-64-2 Silica-Amorphous Silica fume

3

• **TLV (Threshold Limit Value established by ACGIH)**

1309-48-4 magnesium oxide

A4

122-39-4 diphenylamine

A4

• **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

• **Canada**

• **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

• **Canadian Ingredient Disclosure list (limit 0.1%)**

122-39-4 diphenylamine

• **Canadian Ingredient Disclosure list (limit 1%)**

1309-48-4 magnesium oxide

7631-86-9 silicon dioxide

• **Directive 2012/18/EU**

• **Named dangerous substances - ANNEX I**

None of the ingredients are listed.

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· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H200 Unstable explosives.
H201 Explosive; mass explosion hazard.
H225 Highly flammable liquid and vapour.
H271 May cause fire or explosion; strong oxidiser.
H272 May intensify fire; oxidiser.
H300 Fatal if swallowed.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H331 Toxic if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern

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vPvB: very Persistent and very Bioaccumulative
Expl. 1.1: Explosives, Division 1.1
Expl. 1.4: Explosives, Division 1.4
Unst. Expl.: Explosives, Unstable explosives
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Ox. Sol. 1: Oxidising Solids, Hazard Category 1
Ox. Sol. 2: Oxidising Solids, Hazard Category 2
Acute Tox. 2: Acute toxicity, Hazard Category 2
Acute Tox. 3: Acute toxicity, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Acute Tox. 1: Acute toxicity, Hazard Category 1
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

Sources

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date July 13, 2015

Reviewed on July 13, 2015

1 Identification

- **Product identifier**
- **Trade name:** Tri-Chamber Flameless CS Grenade
- **Article number:** 1032 (1012473)
- **Recommended use and restriction on use**
- **Recommended use:** Crowd Control Device
- **Restrictions on use:** Contact manufacturer.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Sol. 1 H228 Flammable solid.



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **Additional information:**

There are no other hazards not otherwise classified that have been identified.

0 percent of the mixture consists of ingredient(s) of unknown toxicity.

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Trade name: Tri-Chamber Flameless CS Grenade

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- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02 GHS06 GHS07 GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

[(2-chlorophenyl)methylene]malononitrile

potassium chlorate

diphenylamine

potassium perchlorate

- **Hazard statements**

H228 Flammable solid.

H301+H331 Toxic if swallowed or if inhaled.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

- **Precautionary statements**

P210 Keep away from heat, sparks, open flames, and hot surfaces. - No smoking.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P284 Wear respiratory protection.

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P301+P310 If swallowed: Immediately call a poison center/doctor.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P320 Specific treatment is urgent (see on this label).

P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P330 Rinse mouth.

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

P302+P352 If on skin: Wash with plenty of water.

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 4
Fire = 0
Reactivity = 4

The substance possesses oxidizing properties.

- **HMIS-ratings (scale 0 - 4)**



Health = *3
Fire = 0
Reactivity = 4

- * - Indicates a long term health hazard from repeated or prolonged exposures.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:**

Product will contain various combinations of the following substances. Not all substances will be in each product.

Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

2698-41-1	[(2-chlorophenyl)methylene]malononitrile	
	<div> Acute Tox. 3, H301; Acute Tox. 2, H330 </div> <div> Resp. Sens. 1, H334 </div> <div> Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335 </div>	
9004-70-0	Nitrocellulose, colloided, granular	
	<div> Expl. 1.1, H201 </div>	
3811-04-9	potassium chlorate	
	<div> Ox. Sol. 1, H271 </div> <div> Acute Tox. 4, H302; Acute Tox. 4, H332 </div>	
57-50-1	sucrose, pure	
598-62-9	manganese carbonate	
7757-79-1	potassium nitrate	
	<div> Ox. Sol. 2, H272 </div>	
7440-50-8	copper	
1309-48-4	magnesium oxide	
7440-66-6	zinc metal	

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7778-74-7	potassium perchlorate ⚠ Ox. Sol. 1, H271 ⚠ Acute Tox. 4, H302	
7704-34-9	sulfur ⚠ Skin Irrit. 2, H315	
592-87-0	lead dithiocyanate ⚠ Carc. 1B, H350; Repr. 1A, H360; STOT RE 2, H373 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	
122-39-4	diphenylamine ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 ⚠ STOT RE 2, H373	
557-04-0	magnesium distearate, pure	
10294-40-3	barium chromate ⚠ Carc. 1A, H350 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	
69012-64-2	Silica-Amorphous Silica fume	≤ 2.5%
1317-61-9	triiron tetraoxide	
7440-21-3	silicon ⚠ Flam. Sol. 2, H228	
7429-90-5	aluminium powder (pyrophoric) ⚠ Pyr. Sol. 1, H250; Water-react. 2, H261	
16291-96-6	charcoal	

• **Additional information:**

For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.

• **Notable Trace Components (≤ 0,1% w/w)**

7758-97-6	lead chromate	⚠ Carc. 1B, H350; Repr. 1A, H360; STOT RE 2, H373
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4 First-aid measures

• **Description of first aid measures**

• **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• **After inhalation:**

Supply fresh air.

Seek immediate medical advice.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Provide oxygen treatment if affected person has difficulty breathing.

• **After skin contact:**

Immediately rinse with water.

If skin irritation continues, consult a doctor.

• **After eye contact:**

Protect unharmed eye.

Remove contact lenses if worn.

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Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**

Unlikely route of exposure.

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

Asthma attacks

Blast injury if mishandled.

Dizziness

Irritant to eyes.

Irritant to skin and mucous membranes.

Breathing difficulty

Coughing

Allergic reactions

Disorientation

- **Danger**

Danger of blast or crush-type injuries.

Danger of pulmonary edema.

Danger of disturbed cardiac rhythm.

Danger of convulsion.

Danger of impaired breathing.

Danger of cerebral edema.

- **Indication of any immediate medical attention and special treatment needed**

Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.

If necessary oxygen respiration treatment.

Contains lead chromate.

Later observation for pneumonia and pulmonary edema.

Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

DO NOT fight fire when fire reaches explosives.

Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.

- **For safety reasons unsuitable extinguishing agents:** None.

- **Special hazards arising from the substance or mixture**

Product may explode if burned in confined space. Individual cartridges may explode. Mass explosion of many cartridges at once is unlikely.

Hazardous combustions products: Metal Compounds, Carbon Monoxide, Carbon Dioxide, Nitrous Oxides, Various complex oxides of metals, Nitrogen.

- **Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

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- **Additional information**

Evacuate area and fight fire from from the upwind side.
Cool endangered receptacles with water spray.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Use respiratory protective device against the effects of fumes/dust/aerosol.

Isolate area and prevent access.

Keep people at a distance and stay upwind.

Wear protective equipment. Keep unprotected persons away.

Remove persons from danger area.

Ensure adequate ventilation.

Protect from heat.

Keep away from ignition sources.

- **Environmental precautions:**

Do not allow to enter sewers/ surface or ground water.

Suppress gases/fumes/haze with water spray.

- **Methods and material for containment and cleaning up:**

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to item 13.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

Handle with care. Avoid jolting, friction and impact.

Keep away from heat and direct sunlight.

Use only in well ventilated areas.

- **Information about protection against explosions and fires:**

Prevent impact and friction.

Keep respiratory protective device available.

Emergency cooling must be available in case of nearby fire.

Protect from heat.

Keep ignition sources away - Do not smoke.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Provide ventilation for receptacles.

Avoid storage near extreme heat, ignition sources or open flame.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.

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Store away from flammable substances.
Do not store together with oxidizing and acidic materials.
Store away from water.

• **Further information about storage conditions:**

Protect from heat and direct sunlight.
Store in dry conditions.
Store receptacle in a well ventilated area.

• **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

• **Additional information about design of technical systems:** No further data; see item 7.

• **Control parameters**

• **Components with limit values that require monitoring at the workplace:**

2698-41-1 [(2-chlorophenyl)methylene]malononitrile

PEL (USA)	Long-term value: 0.4 mg/m ³ , 0.05 ppm
REL (USA)	Ceiling limit value: 0.4 mg/m ³ , 0.05 ppm Skin
TLV (USA)	Ceiling limit value: 0.39 mg/m ³ , 0.05 ppm Skin
EL (Canada)	Ceiling limit value: 0.05 ppm Skin
EV (Canada)	Ceiling limit value: 0.4 mg/m ³ , 0.05 ppm Skin
LMPE (Mexico)	Ceiling limit value: 0.05 ppm A4, PIEL

57-50-1 sucrose, pure

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust; **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ total dust
LMPE (Mexico)	Long-term value: 10 mg/m ³ A4

598-62-9 manganese carbonate

PEL (USA)	Ceiling limit value: 5 mg/m ³ as Mn
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Trade name: Tri-Chamber Flameless CS Grenade

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REL (USA)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ as Mn
TLV (USA)	Long-term value: 0.02* 0.1* mg/m ³ as Mn; *respirable **inhalable fraction
EL (Canada)	Long-term value: 0.2 mg/m ³ as Mn; R
LMPE (Mexico)	Long-term value: 0.2 mg/m ³ como Mn

1309-48-4 magnesium oxide

PEL (USA)	Long-term value: 15* mg/m ³ fume; *total particulate
TLV (USA)	Long-term value: 10* mg/m ³ *as inhalable fraction
EL (Canada)	Short-term value: 10** mg/m ³ Long-term value: 10* 3** mg/m ³ *inhalable fume; **respirable dust and fume
EV (Canada)	Long-term value: 10 mg/m ³ inhalable
LMPE (Mexico)	Long-term value: 10* mg/m ³ A4, *fracción respirable

1309-37-1 diiron trioxide / iron (III) oxide

PEL (USA)	Long-term value: 10* 15** 5*** mg/m ³ *Fume; Rouge: **Total dust, ***respirable
REL (USA)	Long-term value: 5 mg/m ³ Dust & fume, as Fe
TLV (USA)	Long-term value: 5* mg/m ³ *as respirable fraction
EL (Canada)	Short-term value: 10** mg/m ³ Long-term value: 5* 10*** 3**** mg/m ³ *dust & fume **fume; Rouge: ***total dust****resp.
EV (Canada)	Long-term value: 5* 10** mg/m ³ *respirable, including Rouge; **total dust
LMPE (Mexico)	Long-term value: 5* mg/m ³ A4, *fracción respirable

7440-50-8 copper

PEL (USA)	Long-term value: 1* 0.1** mg/m ³ as Cu *dusts and mists **fume
REL (USA)	Long-term value: 1* 0.1** mg/m ³ as Cu *dusts and mists **fume
TLV (USA)	Long-term value: 1* 0.2** mg/m ³ *dusts and mists; **fume; as Cu

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Trade name: Tri-Chamber Flameless CS Grenade

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EL (Canada)	Long-term value: 1* 0.2** mg/m ³ *dusts and mists; **fume, as Cu
EV (Canada)	Long-term value: 0.2* 1** mg/m ³ as copper, *fume; **dust and mists
LMPE (Mexico)	Long-term value: 0.2* 1** mg/m ³ *humo (como Cu); **polvo y niebla (como Cu)

7440-21-3 silicon

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	TLV withdrawn
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust; **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ total dust
LMPE (Mexico)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³ (e)

7440-67-7 zirconium powder (pyrophoric)

PEL (USA)	Long-term value: 5 mg/m ³ as Zr
REL (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
TLV (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
EL (Canada)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
EV (Canada)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as zirconium
LMPE (Mexico)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ A4; como Zr

7429-90-5 aluminium powder (pyrophoric)

PEL (USA)	Long-term value: 15*; 15** mg/m ³ *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.

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TLV (USA)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
EL (Canada)	Long-term value: 1.0 mg/m ³ respirable, as Al
EV (Canada)	Long-term value: 5 mg/m ³ aluminium-containing (as aluminium)
LMPE (Mexico)	Long-term value: 1* mg/m ³ A4, *fracción respirable

592-87-0 lead dithiocyanate

PEL (USA)	Long-term value: 5 mg/m ³ as CN; Skin
EV (Canada)	Long-term value: 0.05 mg/m ³ as Pb, Skin (organic compounds)

122-39-4 diphenylamine

REL (USA)	Long-term value: 10 mg/m ³
TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10 mg/m ³
EV (Canada)	Long-term value: 10 mg/m ³
LMPE (Mexico)	Long-term value: 10 mg/m ³ A4

557-04-0 magnesium distearate, pure

TLV (USA)	Long-term value: 10 mg/m ³
LMPE (Mexico)	Long-term value: 10 mg/m ³ A4

10294-40-3 barium chromate

PEL (USA)	Long-term value: 0.005* mg/m ³ Ceiling limit value: 0.1** mg/m ³ *as Cr(VI) **as CrO ₃ ; see 29 CFR 1910.1026
REL (USA)	Long-term value: 0.0002 mg/m ³ as Cr; See Pocket Guide Apps. A and C
TLV (USA)	Long-term value: 0.01 mg/m ³ as Cr
EL (Canada)	Long-term value: 0.01 mg/m ³ as Cr; ACGIH A1, IARC 1
LMPE (Mexico)	Long-term value: 0.01 mg/m ³ A1; como Cr

69012-64-2 Silica-Amorphous Silica fume

TLV (USA)	TLV withdrawn
EL (Canada)	Long-term value: 4* 1.5** mg/m ³ fume *total; **respirable
EV (Canada)	Long-term value: 2 mg/m ³ respirable

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Trade name: Tri-Chamber Flameless CS Grenade

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LMPE (Mexico)	Long-term value: 2 mg/m ³ (j)
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Ingredients with biological limit values:
10294-40-3 barium chromate

BEI (USA)	25 µg/L Medium: urine Time: end of shift at end of workweek Parameter: Total chromium (fume) 10 µg/L Medium: urine Time: increase during shift Parameter: Total chromium (fume)
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• **Additional information:** The lists that were valid during the creation were used as basis.

• **Exposure controls**

• **Personal protective equipment:**

• **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Avoid close or long term contact with the skin.

Avoid contact with the eyes.

Do not inhale dust / smoke / mist.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Do not inhale gases / fumes / aerosols.

• **Engineering controls:** Provide adequate ventilation.

• **Breathing equipment:**



Combined Organic Vapor and Particulate Respirator is recommended for use during all processing activities.

Wear positive pressure NIOSH or European EN149 vapor respirators when deploying product in large quantities.

Respiratory protection required.

• **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be

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checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment**

No further relevant information available.

- **Risk management measures**

See Section 7 for additional information.

Organizational measures should be in place for all activities involving this product.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Solid material
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Color:	Grey
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• Odor:	Characteristic
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• Odor threshold:	Not determined.
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• pH-value:	Not applicable.
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- **Change in condition**

Melting point/Melting range:	Undetermined.
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Boiling point/Boiling range:	Undetermined.
-------------------------------------	---------------

• Flash point:	Not applicable.
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• Flammability (solid, gaseous):	Not determined.
---	-----------------

• Auto-ignition temperature:	Not determined.
-------------------------------------	-----------------

• Decomposition temperature:	Not determined.
-------------------------------------	-----------------

• Auto igniting:	Product is not self-igniting.
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• Danger of explosion:	Extreme risk of explosion by shock, friction, fire or other sources of ignition.
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- **Explosion limits:**

Lower:	Not determined.
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Upper:	Not determined.
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• Vapor pressure:	Not applicable.
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• Density:	Not determined.
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• Relative density	Not determined.
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• Vapour density	Not applicable.
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Trade name: Tri-Chamber Flameless CS Grenade

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- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with Water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Flammable solid.
Contact with acids releases toxic gases.
Toxic fumes may be released if heated above the decomposition point.
Can react violently with oxygen rich (oxidizing) material. Danger of Explosion.
Strong exothermic reaction with acids.
Develops toxic gases / fumes.
- **Conditions to avoid**
Keep ignition sources away - Do not smoke.
Store away from oxidizing agents.
Keep away from heat and direct sunlight.
Cartridge may detonate if case is punctured or severely damaged.
- **Incompatible materials:** Contact with acids liberates toxic gas.
- **Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Hydrocarbons
Leadoxide vapor
Bariumoxide vapor
Nitrogen oxides (NOx)
Chlorine compounds
Poisonous gases/vapors
Irritant gases/vapors

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

LD/LC50 values that are relevant for classification:
2698-41-1 [(2-chlorophenyl)methylene]malononitrile
Oral LD50 178 mg/kg (rat)

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Trade name: Tri-Chamber Flameless CS Grenade

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3811-04-9 potassium chlorate

Oral | LD50 | 1870 mg/kg (rat)

122-39-4 diphenylamine

Oral | LD50 | 1120 mg/kg (rat)

7758-97-6 lead chromate

Oral | LD50 | 12000 mg/kg (mouse)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Additional toxicological information:** Toxic and/or corrosive effects may be delayed up to 24 hours.

• **Carcinogenic categories**• **NTP (National Toxicology Program)**

592-87-0 | lead dithiocyanate

R

10294-40-3 | barium chromate

K

• **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

• **Probable Routes of Exposure**

Ingestion.

Inhalation.

Eye contact.

Skin contact.

• **Acute effects (acute toxicity, irritation and corrosivity):**

Irritating to eyes, respiratory system and skin.

Harmful in contact with skin.

Toxic if swallowed or if inhaled.

May cause sensitisation by inhalation and skin contact.

• **Repeated Dose Toxicity:**

Repeated exposures may result in skin and/or respiratory sensitivity.

May cause damage to organs through prolonged or repeated exposure.

• **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**

- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

12 Ecological information• **Toxicity**• **Aquatic toxicity:**

Toxic for aquatic organisms

The product contains materials that are harmful to the environment.

2698-41-1 [(2-chlorophenyl)methylene]malononitrile

EC50 | 0.2-0.3 mg/kg (Oncorhynchus mykiss)

- **Persistence and degradability** The product is partially biodegradable. Significant residuals remain.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** May be accumulated in organism
- **Mobility in soil** No further relevant information available.

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Printing date July 13, 2015

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Trade name: Tri-Chamber Flameless CS Grenade

(Contd. of page 14)

- **Ecotoxical effects:**

- **Remark:** Toxic for fish

- **Additional ecological information:**

- **General notes:**

This statement was deduced from the properties of the single components.

The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary.

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to hazardous waste disposers.

After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**

- **DOT, ADR, IMDG, IATA**

UN1700

- **UN proper shipping name**

- **DOT**

Tear gas candles

- **ADR**

1700 TEAR GAS CANDLES

- **IMDG, IATA**

TEAR GAS CANDLES

- **Transport hazard class(es)**

- **DOT**



- **Class**

6.1 Toxic substances

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Trade name: Tri-Chamber Flameless CS Grenade

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· **Label** 6.1, 4.1

· **ADR**



· **Class** 6.1 (TF3) Toxic substances
 · **Label** 6.1+4.1

· **IMDG**



· **Class** 6.1 Toxic substances
 · **Label** 6.1/4.1

· **IATA**



· **Class** 6.1 Toxic substances
 · **Label** 6.1 (4.1)
 · **Packing group**
 · **DOT, ADR, IMDG, IATA** II
 · **Environmental hazards:** Not applicable.
 · **Special precautions for user** Warning: Toxic substances
 · **Danger code (Kemler):** -
 · **EMS Number:** F-A,S-G
 · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
 · **Transport/Additional information:**

· **ADR**

· **Excepted quantities (EQ)** Code: E0
 Not permitted as Excepted Quantity
 · **UN "Model Regulation":** UN1700, Tear gas candles, 6.1 (4.1), II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

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Reviewed on July 13, 2015

Trade name: Tri-Chamber Flameless CS Grenade

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• **Section 313 (Specific toxic chemical listings):**

598-62-9	manganese carbonate
7757-79-1	potassium nitrate
7440-50-8	copper
7440-66-6	zinc metal
7429-90-5	aluminium powder (pyrophoric)

• **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

• **Proposition 65 (California)**

• **Chemicals known to cause cancer:**

Contains trace quantities of substances known to the State of California to cause cancer.

592-87-0	lead dithiocyanate
10294-40-3	barium chromate
7758-97-6	lead chromate

• **Chemicals known to cause reproductive toxicity for females:**

Present in trace quantities.

10294-40-3	barium chromate
7758-97-6	lead chromate

• **Chemicals known to cause reproductive toxicity for males:**

Present in trace quantities.

10294-40-3	barium chromate
7758-97-6	lead chromate

• **Chemicals known to cause developmental toxicity:**

Present in trace quantities.

10294-40-3	barium chromate
7758-97-6	lead chromate

• **Carcinogenic categories**

• **EPA (Environmental Protection Agency)**

598-62-9	manganese carbonate	D
7440-50-8	copper	D
7440-66-6	zinc metal	D, I, II
7778-74-7	potassium perchlorate	NL
10294-40-3	barium chromate	A(inh), D(oral), K/L(inh), CBD(oral)

• **IARC (International Agency for Research on Cancer)**

1309-37-1	diiron trioxide / iron (III) oxide	3
10294-40-3	barium chromate	1
69012-64-2	Silica-Amorphous Silica fume	3

• **TLV (Threshold Limit Value established by ACGIH)**

2698-41-1	[(2-chlorophenyl)methylene]malononitrile	A4
57-50-1	sucrose, pure	A4

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Trade name: Tri-Chamber Flameless CS Grenade

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1309-48-4	magnesium oxide	A4
1309-37-1	diiron trioxide / iron (III) oxide	A4
7440-67-7	zirconium powder (pyrophoric)	A4
7429-90-5	aluminium powder (pyrophoric)	A4
122-39-4	diphenylamine	A4
10294-40-3	barium chromate	A1

· NIOSH-Ca (National Institute for Occupational Safety and Health)

10294-40-3	barium chromate
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· State Right to Know Listings

None of the ingredients is listed.

· Canadian substance listings:
· Canadian Domestic Substances List (DSL)

9004-70-0	Nitrocellulose, colloided, granular
3811-04-9	potassium chlorate
57-50-1	sucrose, pure
598-62-9	manganese carbonate
7757-79-1	potassium nitrate
1309-48-4	magnesium oxide
1309-37-1	diiron trioxide / iron (III) oxide
7440-50-8	copper
7440-32-6	titanium
1317-61-9	triiron tetraoxide
7440-66-6	zinc metal
7440-21-3	silicon
7440-67-7	zirconium powder (pyrophoric)
7429-90-5	aluminium powder (pyrophoric)
7440-44-0	carbon

· Canadian Ingredient Disclosure list (limit 0.1%)

598-62-9	manganese carbonate
122-39-4	diphenylamine
10294-40-3	barium chromate

· Canadian Ingredient Disclosure list (limit 1%)

2698-41-1	[(2-chlorophenyl)methylene]malononitrile
1309-48-4	magnesium oxide
1309-37-1	diiron trioxide / iron (III) oxide
7440-50-8	copper
7429-90-5	aluminium powder (pyrophoric)

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Trade name: Tri-Chamber Flameless CS Grenade

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- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** July 13, 2015 / -

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 Expl. 1.1: Explosives, Division 1.1
 Flam. Sol. 1: Flammable solids, Hazard Category 1
 Flam. Sol. 2: Flammable solids, Hazard Category 2
 Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1
 Water-react. 2: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 2

Ox. Sol. 1: Oxidising Solids, Hazard Category 1
 Ox. Sol. 2: Oxidising Solids, Hazard Category 2
 Acute Tox. 3: Acute toxicity, Hazard Category 3
 Acute Tox. 4: Acute toxicity, Hazard Category 4
 Acute Tox. 2: Acute toxicity, Hazard Category 2
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
 Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 Carc. 1A: Carcinogenicity, Hazard Category 1A
 Carc. 1B: Carcinogenicity, Hazard Category 1B
 Repr. 1A: Reproductive toxicity, Hazard Category 1A
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
 STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

- **Sources**

SDS Prepared by:

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Website: www.chemtelinc.com

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date August 5, 2015

Revision: August 5, 2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Triple-Chaser® Grenade, OC
- **Article number:** 1020
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
Explosive product.
Crowd Control Device
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **Further information obtainable from:** Customer Care Department
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Classifications listed are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.



exploding bomb

Expl. 1.4	H204 Fire or projection hazard.
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Acute Tox. 4	H302 Harmful if swallowed.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
STOT SE 3	H335 May cause respiratory irritation.

Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.
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- **Additional information:** 0 % of the mixture consists of component(s) of unknown toxicity.

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2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.

The product is additionally classified and labelled according to the Globally Harmonized System within the United States (GHS).

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS01 GHS07

Signal word Warning

Hazard-determining components of labelling:

potassium chlorate

Capsaicin

Hazard statements

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.

H204 Fire or projection hazard.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P250 Do not subject to grinding/shock/friction.

P261 Avoid breathing dust.

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P373 DO NOT fight fire when fire reaches explosives.

P321 Specific treatment (see on this label).

P370+P380 In case of fire: Evacuate area.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P372 Explosion risk in case of fire.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water.

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- P362+P364 Take off contaminated clothing and wash it before reuse.
 P401 Store in accordance with local/regional/national/international regulations.
 P405 Store locked up.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Additional information:**

Can become highly flammable in use.

• **2.3 Other hazards**

• **Results of PBT and vPvB assessment**

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

• **Explosive Product Notice**

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES - The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.





WARNING - All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

SECTION 3: Composition/information on ingredients

• **3.2 Mixtures**

• **Description:** Mixture of substances listed below with nonhazardous additions.

• **Dangerous components:**

CAS: 100-21-0 EINECS: 202-830-0	terephthalic acid substance with a Community workplace exposure limit	10-25%
CAS: 9004-70-0 EC number: 603-037-0	Nitrocellulose, colloided, granular  Expl. 1.1, H201	10-25%
CAS: 3811-04-9 EINECS: 223-289-7 Index number: 017-004-00-3	potassium chlorate  Ox. Sol. 1, H271  Aquatic Chronic 2, H411  Acute Tox. 4, H302; Acute Tox. 4, H332	10-25%
CAS: 57-50-1 EINECS: 200-334-9	sucrose, pure substance with a Community workplace exposure limit	10-25%

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CAS: 546-93-0 EINECS: 208-915-9	Magnesium carbonate substance with a Community workplace exposure limit	2,5-10%
CAS: 404-86-4 EINECS: 206-969-8	Capsaicin Acute Tox. 3, H301 Eye Dam. 1, H318 Skin Irrit. 2, H315; STOT SE 3, H335	2,5-10%
CAS: 7757-79-1 EINECS: 231-818-8	potassium nitrate Ox. Sol. 2, H272	2,5-10%
CAS: 557-04-0 EINECS: 209-150-3	magnesium distearate, pure substance with a Community workplace exposure limit	≤ 2,5%
CAS: 7440-21-3 EINECS: 231-130-8	silicon Flam. Sol. 2, H228	≤ 2,5%
CAS: 7429-90-5 EINECS: 231-072-3 Index number: 013-001-00-6	aluminium powder (pyrophoric) Pyr. Sol. 1, H250; Water-react. 2, H261	≤ 2,5%

Additional information:

For the wording of the listed Hazard Statements refer to section 16.

For the listed ingredient(s), the identity and exact percentages are being withheld as a trade secret.

SECTION 4: First aid measures**4.1 Description of first aid measures****General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

Supply fresh air.

Seek medical help for symptoms or if unconscious.

Provide oxygen treatment if affected person has difficulty breathing.

In case of irregular breathing or respiratory arrest provide artificial respiration.

After skin contact:

Immediately remove any clothing soiled by the product.

Wash with soap and water.

After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Unlikely route of exposure.

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

Blast injury if mishandled.

Breathing difficulty

Coughing

Irritating to eyes, respiratory system and skin.

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- **Hazards** Danger of blast or crush-type injuries.
- **4.3 Indication of any immediate medical attention and special treatment needed**
If necessary oxygen respiration treatment.
Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
DO NOT fight fire when fire reaches explosives.
Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
Fire or projection hazard.
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Eliminate all ignition sources if safe to do so.
Evacuate area and fight fire from from the upwind side.
Cool endangered product with water spray.
Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions. Individual devices will randomly explode. Will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. In unusual cases, shrapnel may be thrown from exploding devices under containment. See 2008 Emergency response Guidebook for further information.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTEL AT 1-800-255-3924. Spills of this material should be handled carefully. Do not subject materials to mechanical shock or extreme heat. A spill of this material will normally not require emergency response team capabilities.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Remove persons from danger area.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Isolate area and prevent access.
- **6.2 Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
- **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.

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Dispose contaminated material as waste according to section 13.
Send for recovery or disposal in suitable receptacles.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Use only outdoors or in a well-ventilated area.
Handle with care. Avoid jolting, friction and impact.

· **Information about fire - and explosion protection:**

Keep respiratory protective device available.
Emergency cooling must be available in case of nearby fire.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Avoid storage near extreme heat, ignition sources or open flame.

· **Information about storage in one common storage facility:**

Store away from foodstuffs.
Store away from flammable substances.

· **Further information about storage conditions:** Store in dry conditions.

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see section 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

100-21-0 terephthalic acid

TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust; **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³

57-50-1 sucrose, pure

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	Long-term value: 10 mg/m ³

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EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust; **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ total dust

546-93-0 Magnesium carbonate

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	TLV withdrawn
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust, **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ total dust

557-04-0 magnesium distearate, pure

TLV (USA)	Long-term value: 10 mg/m ³
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7440-21-3 silicon

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	TLV withdrawn
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust; **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ total dust

7429-90-5 aluminium powder (pyrophoric)

PEL (USA)	Long-term value: 15*; 15** mg/m ³ *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV (USA)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
EL (Canada)	Long-term value: 1,0 mg/m ³ respirable, as Al
EV (Canada)	Long-term value: 5 mg/m ³ aluminium-containing (as aluminium)

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**
- **Engineering measures** Provide adequate ventilation.

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- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not inhale dust / smoke / mist.

- **Respiratory protection:**

Suitable respiratory protective device recommended.

Wear positive pressure NIOSH or European EN149 vapor respirators when deploying product in large quantities.

- **Protection of hands:**



Protective gloves

Wear gloves when handling deployed rounds.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment**

No further relevant information available.

- **Risk management measures**

See Section 7 for additional information.

Organizational measures should be in place for all activities involving this product.

No further relevant information available.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Solid material

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Colour:	According to product specification
· Odour:	Odourless
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	Not Determined.
Boiling point/Boiling range:	Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not applicable.
· Auto/Self-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not self-igniting.
· Danger of explosion:	Not determined.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Oxidising properties	Contains oxidizing agent.
· Vapour pressure:	Not determined.
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Fire or projection hazard.
Toxic fumes may be released if heated above the decomposition point.
Contact with acids releases toxic gases.

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- Acts as an oxidising agent on organic materials such as wood, paper and fats.
- **10.4 Conditions to avoid** Sources of ignition, open flame, incompatible materials.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Nitrogen oxides
Chlorine compounds

SECTION 11: Toxicological information

• 11.1 Information on toxicological effects

- **Acute toxicity**
Harmful if swallowed.

• LD/LC50 values relevant for classification:

3811-04-9 potassium chlorate

Oral	LD50	1870 mg/kg (rat)
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- **Primary irritant effect:**
Effects based on exposure to dusts/mists/spray/vapours released during deployment. Unused product does not possess these effects.
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
Normal handling of the undeployed product poses little or no health hazards, One should avoid inhalation by wearing appropriate respiratory protection when exposed to the chemical ingredients of the product above listed TLV's or when exposed to the post ignition by-products. This product is a canister which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. When the product is used, particles may be generated which may be irritating to the eyes and the respiratory tract.
- **Acute effects (acute toxicity, irritation and corrosivity):** Irritating to eyes, respiratory system and skin.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**
- **Germ cell mutagenicity**
Based on available data, the classification criteria are not met.
- **Carcinogenicity**
Based on available data, the classification criteria are not met.
- **Reproductive toxicity**
Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure**
Based on available data, the classification criteria are not met.
- **Aspiration hazard**
Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.

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- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** May be accumulated in organism
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary
 Harmful to aquatic organisms
 Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
 Incinerate in accordance with local, state and federal regulations.
 The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to local official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT, ADR, IMDG, IATA** UN0301
- **14.2 UN proper shipping name**
- **DOT, IMDG, IATA** Ammunition Tear-producing with burster, expelling charge or propelling charge
- **ADR** 0301 Ammunition Tear-producing with burster, expelling charge or propelling charge

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14.3 Transport hazard class(es)

DOT



- Class 1.4
- Label 1.4G+6.1+8

ADR, IMDG, IATA



- Class 1.4
- Label 1.4G+6.1+8
- 14.4 Packing group
- DOT, ADR, IMDG, IATA II
- 14.5 Environmental hazards:
- Marine pollutant: No
- Special marking (IATA):



Cargo Aircraft Only.

- 14.6 Special precautions for user Not applicable.
- EMS Number: F-B, S-Z
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.

Transport/Additional information:

- ADR
- Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity
- UN "Model Regulation": UN0301, Ammunition Tear-producing with burster, expelling charge or propelling charge, 1.4G (6.1+8), II

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

7757-79-1 | potassium nitrate

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· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

Present in trace quantities.

592-87-0 | lead dithiocyanate

10294-40-3 | barium chromate

7758-97-6 | lead chromate

· **Chemicals known to cause reproductive toxicity for females:**

Present in trace quantities.

10294-40-3 | barium chromate

7758-97-6 | lead chromate

· **Chemicals known to cause reproductive toxicity for males:**

Present in trace quantities.

10294-40-3 | barium chromate

7758-97-6 | lead chromate

· **Chemicals known to cause developmental toxicity:**

Present in trace quantities.

10294-40-3 | barium chromate

7758-97-6 | lead chromate

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH)**

57-50-1 | sucrose, pure

A4

7429-90-5 | aluminium powder (pyrophoric)

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

100-21-0 | terephthalic acid

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- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I**

7757-79-1	potassium nitrate
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- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200

- **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

- **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H201 Explosive; mass explosion hazard.
H228 Flammable solid.
H250 Catches fire spontaneously if exposed to air.
H261 In contact with water releases flammable gases.
H271 May cause fire or explosion; strong oxidiser.
H272 May intensify fire; oxidiser.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative

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Expl. 1.1: Explosives, Division 1.1
Expl. 1.4: Explosives, Division 1.4
Flam. Sol. 2: Flammable solids, Hazard Category 2
Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1
Water-react. 2: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 2

Ox. Sol. 1: Oxidising Solids, Hazard Category 1
Ox. Sol. 2: Oxidising Solids, Hazard Category 2
Acute Tox. 3: Acute toxicity, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

Sources

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com

Safety Data Sheet

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Reviewed on July 13, 2015

1 Identification

- **Product identifier**
- **Trade name:** Triple-Chaser® Separating Canister, CS
- **Article number:** 1026 (1012309)
- **Recommended use and restriction on use**
- **Recommended use:** Crowd Control Device
- **Restrictions on use:** Contact manufacturer.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Sol. 1 H228 Flammable solid.



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **Additional information:**

There are no other hazards not otherwise classified that have been identified.

0 percent of the mixture consists of ingredient(s) of unknown toxicity.

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- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02 GHS06 GHS07 GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

[(2-chlorophenyl)methylene]malononitrile

potassium chlorate

diphenylamine

potassium perchlorate

- **Hazard statements**

H228 Flammable solid.

H301+H331 Toxic if swallowed or if inhaled.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

- **Precautionary statements**

P210 Keep away from heat, sparks, open flames, and hot surfaces. - No smoking.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P284 Wear respiratory protection.

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P301+P310 If swallowed: Immediately call a poison center/doctor.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P320 Specific treatment is urgent (see on this label).

P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P330 Rinse mouth.

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

P302+P352 If on skin: Wash with plenty of water.

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 4
Fire = 0
Reactivity = 4

The substance possesses oxidizing properties.

- **HMIS-ratings (scale 0 - 4)**



Health = *3
Fire = 0
Reactivity = 4

- * - Indicates a long term health hazard from repeated or prolonged exposures.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:**

Product will contain various combinations of the following substances. Not all substances will be in each product.

Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

2698-41-1	[(2-chlorophenyl)methylene]malononitrile	
	Acute Tox. 3, H301; Acute Tox. 2, H330 Resp. Sens. 1, H334 Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	
9004-70-0	Nitrocellulose, colloided, granular	
	Expl. 1.1, H201	
3811-04-9	potassium chlorate	
	Ox. Sol. 1, H271 Acute Tox. 4, H302; Acute Tox. 4, H332	
57-50-1	sucrose, pure	
598-62-9	manganese carbonate	
7757-79-1	potassium nitrate	
	Ox. Sol. 2, H272	
7440-50-8	copper	
1309-48-4	magnesium oxide	
7440-66-6	zinc metal	

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7778-74-7	potassium perchlorate ⚠ Ox. Sol. 1, H271 ⚠ Acute Tox. 4, H302	
7704-34-9	sulfur ⚠ Skin Irrit. 2, H315	
592-87-0	lead dithiocyanate ⚠ Carc. 1B, H350; Repr. 1A, H360; STOT RE 2, H373 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	
122-39-4	diphenylamine ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 ⚠ STOT RE 2, H373	
557-04-0	magnesium distearate, pure	
10294-40-3	barium chromate ⚠ Carc. 1A, H350 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	
69012-64-2	Silica-Amorphous Silica fume	≤ 2.5%
1317-61-9	triiron tetraoxide	
7440-21-3	silicon ⚠ Flam. Sol. 2, H228	
7429-90-5	aluminium powder (pyrophoric) ⚠ Pyr. Sol. 1, H250; Water-react. 2, H261	
16291-96-6	charcoal	

• **Additional information:**

For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.

• **Notable Trace Components (≤ 0,1% w/w)**

7758-97-6	lead chromate	⚠ Carc. 1B, H350; Repr. 1A, H360; STOT RE 2, H373
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4 First-aid measures

• **Description of first aid measures**

• **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• **After inhalation:**

Supply fresh air.

Seek immediate medical advice.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Provide oxygen treatment if affected person has difficulty breathing.

• **After skin contact:**

Immediately rinse with water.

If skin irritation continues, consult a doctor.

• **After eye contact:**

Protect unharmed eye.

Remove contact lenses if worn.

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Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**

Unlikely route of exposure.

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

Asthma attacks

Blast injury if mishandled.

Dizziness

Irritant to eyes.

Irritant to skin and mucous membranes.

Breathing difficulty

Coughing

Allergic reactions

Disorientation

- **Danger**

Danger of blast or crush-type injuries.

Danger of pulmonary edema.

Danger of disturbed cardiac rhythm.

Danger of convulsion.

Danger of impaired breathing.

Danger of cerebral edema.

- **Indication of any immediate medical attention and special treatment needed**

Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.

If necessary oxygen respiration treatment.

Contains lead chromate.

Later observation for pneumonia and pulmonary edema.

Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

DO NOT fight fire when fire reaches explosives.

Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.

- **For safety reasons unsuitable extinguishing agents:** None.

- **Special hazards arising from the substance or mixture**

Product may explode if burned in confined space. Individual cartridges may explode. Mass explosion of many cartridges at once is unlikely.

Hazardous combustions products: Metal Compounds, Carbon Monoxide, Carbon Dioxide, Nitrous Oxides, Various complex oxides of metals, Nitrogen.

- **Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

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· **Additional information**

Evacuate area and fight fire from from the upwind side.
Cool endangered receptacles with water spray.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Use respiratory protective device against the effects of fumes/dust/aerosol.

Isolate area and prevent access.

Keep people at a distance and stay upwind.

Wear protective equipment. Keep unprotected persons away.

Remove persons from danger area.

Ensure adequate ventilation.

Protect from heat.

Keep away from ignition sources.

· **Environmental precautions:**

Do not allow to enter sewers/ surface or ground water.

Suppress gases/fumes/haze with water spray.

· **Methods and material for containment and cleaning up:**

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to item 13.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Handle with care. Avoid jolting, friction and impact.

Keep away from heat and direct sunlight.

Use only in well ventilated areas.

· **Information about protection against explosions and fires:**

Prevent impact and friction.

Keep respiratory protective device available.

Emergency cooling must be available in case of nearby fire.

Protect from heat.

Keep ignition sources away - Do not smoke.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Provide ventilation for receptacles.

Avoid storage near extreme heat, ignition sources or open flame.

· **Information about storage in one common storage facility:**

Store away from foodstuffs.

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Store away from flammable substances.
Do not store together with oxidizing and acidic materials.
Store away from water.

• **Further information about storage conditions:**

Protect from heat and direct sunlight.
Store in dry conditions.
Store receptacle in a well ventilated area.

• **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

• **Additional information about design of technical systems:** No further data; see item 7.

• **Control parameters**

• **Components with limit values that require monitoring at the workplace:**

2698-41-1 [(2-chlorophenyl)methylene]malononitrile

PEL (USA)	Long-term value: 0.4 mg/m ³ , 0.05 ppm
REL (USA)	Ceiling limit value: 0.4 mg/m ³ , 0.05 ppm Skin
TLV (USA)	Ceiling limit value: 0.39 mg/m ³ , 0.05 ppm Skin
EL (Canada)	Ceiling limit value: 0.05 ppm Skin
EV (Canada)	Ceiling limit value: 0.4 mg/m ³ , 0.05 ppm Skin
LMPE (Mexico)	Ceiling limit value: 0.05 ppm A4, PIEL

57-50-1 sucrose, pure

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust; **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ total dust
LMPE (Mexico)	Long-term value: 10 mg/m ³ A4

598-62-9 manganese carbonate

PEL (USA)	Ceiling limit value: 5 mg/m ³ as Mn
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REL (USA)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ as Mn
TLV (USA)	Long-term value: 0.02* 0.1* mg/m ³ as Mn; *respirable **inhalable fraction
EL (Canada)	Long-term value: 0.2 mg/m ³ as Mn; R
LMPE (Mexico)	Long-term value: 0.2 mg/m ³ como Mn

1309-48-4 magnesium oxide

PEL (USA)	Long-term value: 15* mg/m ³ fume; *total particulate
TLV (USA)	Long-term value: 10* mg/m ³ *as inhalable fraction
EL (Canada)	Short-term value: 10** mg/m ³ Long-term value: 10* 3** mg/m ³ *inhalable fume; **respirable dust and fume
EV (Canada)	Long-term value: 10 mg/m ³ inhalable
LMPE (Mexico)	Long-term value: 10* mg/m ³ A4, *fracción respirable

1309-37-1 diiron trioxide / iron (III) oxide

PEL (USA)	Long-term value: 10* 15** 5*** mg/m ³ *Fume; Rouge: **Total dust, ***respirable
REL (USA)	Long-term value: 5 mg/m ³ Dust & fume, as Fe
TLV (USA)	Long-term value: 5* mg/m ³ *as respirable fraction
EL (Canada)	Short-term value: 10** mg/m ³ Long-term value: 5* 10*** 3**** mg/m ³ *dust & fume **fume; Rouge: ***total dust****resp.
EV (Canada)	Long-term value: 5* 10** mg/m ³ *respirable, including Rouge; **total dust
LMPE (Mexico)	Long-term value: 5* mg/m ³ A4, *fracción respirable

7440-50-8 copper

PEL (USA)	Long-term value: 1* 0.1** mg/m ³ as Cu *dusts and mists **fume
REL (USA)	Long-term value: 1* 0.1** mg/m ³ as Cu *dusts and mists **fume
TLV (USA)	Long-term value: 1* 0.2** mg/m ³ *dusts and mists; **fume; as Cu

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EL (Canada)	Long-term value: 1* 0.2** mg/m ³ *dusts and mists; **fume, as Cu
EV (Canada)	Long-term value: 0.2* 1** mg/m ³ as copper, *fume; **dust and mists
LMPE (Mexico)	Long-term value: 0.2* 1** mg/m ³ *humo (como Cu); **polvo y niebla (como Cu)

7440-21-3 silicon

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	TLV withdrawn
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust; **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ total dust
LMPE (Mexico)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³ (e)

7440-67-7 zirconium powder (pyrophoric)

PEL (USA)	Long-term value: 5 mg/m ³ as Zr
REL (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
TLV (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
EL (Canada)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
EV (Canada)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as zirconium
LMPE (Mexico)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ A4; como Zr

7429-90-5 aluminium powder (pyrophoric)

PEL (USA)	Long-term value: 15*; 15** mg/m ³ *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.

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TLV (USA)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
EL (Canada)	Long-term value: 1.0 mg/m ³ respirable, as Al
EV (Canada)	Long-term value: 5 mg/m ³ aluminium-containing (as aluminium)
LMPE (Mexico)	Long-term value: 1* mg/m ³ A4, *fracción respirable

592-87-0 lead dithiocyanate

PEL (USA)	Long-term value: 5 mg/m ³ as CN; Skin
EV (Canada)	Long-term value: 0.05 mg/m ³ as Pb, Skin (organic compounds)

122-39-4 diphenylamine

REL (USA)	Long-term value: 10 mg/m ³
TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10 mg/m ³
EV (Canada)	Long-term value: 10 mg/m ³
LMPE (Mexico)	Long-term value: 10 mg/m ³ A4

557-04-0 magnesium distearate, pure

TLV (USA)	Long-term value: 10 mg/m ³
LMPE (Mexico)	Long-term value: 10 mg/m ³ A4

10294-40-3 barium chromate

PEL (USA)	Long-term value: 0.005* mg/m ³ Ceiling limit value: 0.1** mg/m ³ *as Cr(VI) **as CrO ₃ ; see 29 CFR 1910.1026
REL (USA)	Long-term value: 0.0002 mg/m ³ as Cr; See Pocket Guide Apps. A and C
TLV (USA)	Long-term value: 0.01 mg/m ³ as Cr
EL (Canada)	Long-term value: 0.01 mg/m ³ as Cr; ACGIH A1, IARC 1
LMPE (Mexico)	Long-term value: 0.01 mg/m ³ A1; como Cr

69012-64-2 Silica-Amorphous Silica fume

TLV (USA)	TLV withdrawn
EL (Canada)	Long-term value: 4* 1.5** mg/m ³ fume *total; **respirable
EV (Canada)	Long-term value: 2 mg/m ³ respirable

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LMPE (Mexico)	Long-term value: 2 mg/m ³ (j)
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Ingredients with biological limit values:
10294-40-3 barium chromate

BEI (USA)	25 µg/L Medium: urine Time: end of shift at end of workweek Parameter: Total chromium (fume) 10 µg/L Medium: urine Time: increase during shift Parameter: Total chromium (fume)
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• **Additional information:** The lists that were valid during the creation were used as basis.

• **Exposure controls**

• **Personal protective equipment:**

• **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Avoid close or long term contact with the skin.

Avoid contact with the eyes.

Do not inhale dust / smoke / mist.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Do not inhale gases / fumes / aerosols.

• **Engineering controls:** Provide adequate ventilation.

• **Breathing equipment:**



Combined Organic Vapor and Particulate Respirator is recommended for use during all processing activities.

Wear positive pressure NIOSH or European EN149 vapor respirators when deploying product in large quantities.

Respiratory protection required.

• **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be

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checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment**

No further relevant information available.

- **Risk management measures**

See Section 7 for additional information.

Organizational measures should be in place for all activities involving this product.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Solid material

Color: Grey

- **Odor:** Characteristic

- **Odor threshold:** Not determined.

- **pH-value:** Not applicable.

- **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not determined.

- **Auto-ignition temperature:** Not determined.

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not self-igniting.

- **Danger of explosion:** Extreme risk of explosion by shock, friction, fire or other sources of ignition.

- **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

- **Vapor pressure:** Not applicable.

- **Density:** Not determined.

- **Relative density** Not determined.

- **Vapour density** Not applicable.

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- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with Water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Flammable solid.
Contact with acids releases toxic gases.
Toxic fumes may be released if heated above the decomposition point.
Can react violently with oxygen rich (oxidizing) material. Danger of Explosion.
Strong exothermic reaction with acids.
Develops toxic gases / fumes.
- **Conditions to avoid**
Keep ignition sources away - Do not smoke.
Store away from oxidizing agents.
Keep away from heat and direct sunlight.
Cartridge may detonate if case is punctured or severely damaged.
- **Incompatible materials:** Contact with acids liberates toxic gas.
- **Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Hydrocarbons
Leadoxide vapor
Bariumoxide vapor
Nitrogen oxides (NOx)
Chlorine compounds
Poisonous gases/vapors
Irritant gases/vapors

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

 · **LD/LC50 values that are relevant for classification:**
2698-41-1 [(2-chlorophenyl)methylene]malononitrile

Oral | LD50 | 178 mg/kg (rat)

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3811-04-9 potassium chlorate

Oral | LD50 | 1870 mg/kg (rat)

122-39-4 diphenylamine

Oral | LD50 | 1120 mg/kg (rat)

7758-97-6 lead chromate

Oral | LD50 | 12000 mg/kg (mouse)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Additional toxicological information:** Toxic and/or corrosive effects may be delayed up to 24 hours.

• **Carcinogenic categories**• **NTP (National Toxicology Program)**

592-87-0 | lead dithiocyanate

R

10294-40-3 | barium chromate

K

• **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

• **Probable Routes of Exposure**

Ingestion.

Inhalation.

Eye contact.

Skin contact.

• **Acute effects (acute toxicity, irritation and corrosivity):**

Irritating to eyes, respiratory system and skin.

Harmful in contact with skin.

Toxic if swallowed or if inhaled.

May cause sensitisation by inhalation and skin contact.

• **Repeated Dose Toxicity:**

Repeated exposures may result in skin and/or respiratory sensitivity.

May cause damage to organs through prolonged or repeated exposure.

• **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**

- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

12 Ecological information• **Toxicity**• **Aquatic toxicity:**

Toxic for aquatic organisms

The product contains materials that are harmful to the environment.

2698-41-1 [(2-chlorophenyl)methylene]malononitrile

EC50 | 0.2-0.3 mg/kg (Oncorhynchus mykiss)

- **Persistence and degradability** The product is partially biodegradable. Significant residuals remain.

• **Behavior in environmental systems:**

- **Bioaccumulative potential** May be accumulated in organism

- **Mobility in soil** No further relevant information available.

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Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

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Reviewed on July 13, 2015

Trade name: Triple-Chaser® Separating Canister, CS

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- **Ecotoxical effects:**

- **Remark:** Toxic for fish

- **Additional ecological information:**

- **General notes:**

This statement was deduced from the properties of the single components.

The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary.

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to hazardous waste disposers.

After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**

- **DOT, ADR, IMDG, IATA**

UN1700

- **UN proper shipping name**

- **DOT**

Tear gas candles

- **ADR**

1700 TEAR GAS CANDLES

- **IMDG, IATA**

TEAR GAS CANDLES

- **Transport hazard class(es)**

- **DOT**



- **Class**

6.1 Toxic substances

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· **Label** 6.1, 4.1

· **ADR**



· **Class** 6.1 (TF3) Toxic substances
 · **Label** 6.1+4.1

· **IMDG**



· **Class** 6.1 Toxic substances
 · **Label** 6.1/4.1

· **IATA**



· **Class** 6.1 Toxic substances
 · **Label** 6.1 (4.1)
 · **Packing group**
 · **DOT, ADR, IMDG, IATA** II
 · **Environmental hazards:** Not applicable.
 · **Special precautions for user** Warning: Toxic substances
 · **Danger code (Kemler):** -
 · **EMS Number:** F-A,S-G
 · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
 · **Transport/Additional information:**

· **ADR**

· **Excepted quantities (EQ)** Code: E0
 Not permitted as Excepted Quantity
 · **UN "Model Regulation":** UN1700, Tear gas candles, 6.1 (4.1), II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

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Trade name: Triple-Chaser® Separating Canister, CS

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• **Section 313 (Specific toxic chemical listings):**

598-62-9	manganese carbonate
7757-79-1	potassium nitrate
7440-50-8	copper
7440-66-6	zinc metal
7429-90-5	aluminium powder (pyrophoric)

• **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

• **Proposition 65 (California)**

• **Chemicals known to cause cancer:**

Contains trace quantities of substances known to the State of California to cause cancer.

592-87-0	lead dithiocyanate
10294-40-3	barium chromate
7758-97-6	lead chromate

• **Chemicals known to cause reproductive toxicity for females:**

Present in trace quantities.

10294-40-3	barium chromate
7758-97-6	lead chromate

• **Chemicals known to cause reproductive toxicity for males:**

Present in trace quantities.

10294-40-3	barium chromate
7758-97-6	lead chromate

• **Chemicals known to cause developmental toxicity:**

Present in trace quantities.

10294-40-3	barium chromate
7758-97-6	lead chromate

• **Carcinogenic categories**

• **EPA (Environmental Protection Agency)**

598-62-9	manganese carbonate	D
7440-50-8	copper	D
7440-66-6	zinc metal	D, I, II
7778-74-7	potassium perchlorate	NL
10294-40-3	barium chromate	A(inh), D(oral), K/L(inh), CBD(oral)

• **IARC (International Agency for Research on Cancer)**

1309-37-1	diiron trioxide / iron (III) oxide	3
10294-40-3	barium chromate	1
69012-64-2	Silica-Amorphous Silica fume	3

• **TLV (Threshold Limit Value established by ACGIH)**

2698-41-1	[(2-chlorophenyl)methylene]malononitrile	A4
57-50-1	sucrose, pure	A4

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1309-48-4	magnesium oxide	A4
1309-37-1	diiron trioxide / iron (III) oxide	A4
7440-67-7	zirconium powder (pyrophoric)	A4
7429-90-5	aluminium powder (pyrophoric)	A4
122-39-4	diphenylamine	A4
10294-40-3	barium chromate	A1

· NIOSH-Ca (National Institute for Occupational Safety and Health)

10294-40-3	barium chromate
------------	-----------------

· State Right to Know Listings

None of the ingredients is listed.

· Canadian substance listings:
· Canadian Domestic Substances List (DSL)

9004-70-0	Nitrocellulose, colloided, granular
3811-04-9	potassium chlorate
57-50-1	sucrose, pure
598-62-9	manganese carbonate
7757-79-1	potassium nitrate
1309-48-4	magnesium oxide
1309-37-1	diiron trioxide / iron (III) oxide
7440-50-8	copper
7440-32-6	titanium
1317-61-9	triiron tetraoxide
7440-66-6	zinc metal
7440-21-3	silicon
7440-67-7	zirconium powder (pyrophoric)
7429-90-5	aluminium powder (pyrophoric)
7440-44-0	carbon

· Canadian Ingredient Disclosure list (limit 0.1%)

598-62-9	manganese carbonate
122-39-4	diphenylamine
10294-40-3	barium chromate

· Canadian Ingredient Disclosure list (limit 1%)

2698-41-1	[(2-chlorophenyl)methylene]malononitrile
1309-48-4	magnesium oxide
1309-37-1	diiron trioxide / iron (III) oxide
7440-50-8	copper
7429-90-5	aluminium powder (pyrophoric)

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- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** July 13, 2015 / -

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 Expl. 1.1: Explosives, Division 1.1
 Flam. Sol. 1: Flammable solids, Hazard Category 1
 Flam. Sol. 2: Flammable solids, Hazard Category 2
 Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1
 Water-react. 2: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 2

Ox. Sol. 1: Oxidising Solids, Hazard Category 1
 Ox. Sol. 2: Oxidising Solids, Hazard Category 2
 Acute Tox. 3: Acute toxicity, Hazard Category 3
 Acute Tox. 4: Acute toxicity, Hazard Category 4
 Acute Tox. 2: Acute toxicity, Hazard Category 2
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
 Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 Carc. 1A: Carcinogenicity, Hazard Category 1A
 Carc. 1B: Carcinogenicity, Hazard Category 1B
 Repr. 1A: Reproductive toxicity, Hazard Category 1A
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
 STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

- **Sources**

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date November 6, 2015

Revision: November 6, 2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Triple-Chaser® Separating Canister, Saf-Smoke™
- **Article number:** 1027 (1012311)
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Explosive product.
- **Uses advised against** Contact manufacturer.
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **Further information obtainable from:** Customer Care Department
- **1.4 Emergency telephone number:**
ChemTel Inc.
+1 (800)255-3924, +1 (813)248-0585



SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.



exploding bomb

Expl. 1.4 H204 Fire or projection hazard.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Additional information:** 0 % of the mixture consists of component(s) of unknown toxicity.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS01

- **Signal word** Warning
- **Hazard statements**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.

(Cont'd. on page 2)

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H204 Fire or projection hazard.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

The following Precautionary Statements are applicable only to the general GHS regulations and not the specific CLP regulation: P374.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P250 Do not subject to grinding/shock/friction.

P280 Wear protective gloves / eye protection / face protection.

P370+P380+P375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

P374 Fight fire with normal precautions from a reasonable distance.

P372 Explosion risk in case of fire.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

Can become highly flammable in use.

NFPA ratings (scale 0 - 4)


Health = 2

Fire = 0

Reactivity = 3

HMIS-ratings (scale 0 - 4)


Health = 1

Fire = 0

Reactivity = 3

2.3 Other hazards
Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Explosive Product Notice

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES - The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.

WARNING - All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 100-21-0 EINECS: 202-830-0	terephthalic acid substance with a Community workplace exposure limit	25-50%
CAS: 9004-70-0 EC number: 603-037-0	Nitrocellulose, colloided, granular Expl. 1.1, H201	25-50%
CAS: 3811-04-9 EINECS: 223-289-7 Index number: 017-004-00-3	potassium chlorate Ox. Sol. 1, H271 Aquatic Chronic 2, H411 Acute Tox. 4, H302; Acute Tox. 4, H332	10-25%
CAS: 57-50-1 EINECS: 200-334-9	sucrose, pure substance with a Community workplace exposure limit	10-25%
CAS: 598-62-9 EINECS: 209-942-9	manganese carbonate substance with a Community workplace exposure limit	2,5-10%

Additional information:

For the listed ingredient(s), the identity and exact percentages are being withheld as a trade secret.
For the wording of the listed Hazard Statements refer to section 16.

Notable Trace Components (≤ 0,1% w/w)

CAS: 592-87-0 EINECS: 209-774-6 Index number: 082-001-00-6	lead dithiocyanate Repr. 1A, H360Df; STOT RE 2, H373 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302; Acute Tox. 4, H332
CAS: 7758-97-6 EINECS: 231-846-0 Index number: 082-004-00-2	lead chromate Carc. 1B, H350; Repr. 1A, H360Df; STOT RE 2, H373 Aquatic Acute 1, H400; Aquatic Chronic 1, H410
CAS: 10294-40-3 EINECS: 233-660-5 Index number: 056-002-00-7	barium chromate Acute Tox. 4, H302; Acute Tox. 4, H332

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:

Unlikely route of exposure.

Brush off loose particles from skin.

If skin irritation is experienced, consult a doctor.

After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

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- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** Blast injury if mishandled.
- **Hazards** Danger of blast or crush-type injuries.
- **4.3 Indication of any immediate medical attention and special treatment needed**
Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
Product may explode if burned in confined space. Individual cartridges may explode. Mass explosion of many cartridges at once is unlikely.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Eliminate all ignition sources if safe to do so.
Cool endangered receptacles with water spray.
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions. Individual devices will randomly explode. Will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. In unusual cases, shrapnel may be thrown from exploding devices under containment. See 2008 Emergency response Guidebook for further information.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTEL AT 1-800-255-3924. Spills of this material should be handled carefully. Do not subject materials to mechanical shock or extreme heat. A spill of this material will normally not require emergency response team capabilities.
Wear protective equipment. Keep unprotected persons away.
Remove persons from danger area.
Ensure adequate ventilation
Protect from heat.
Isolate area and prevent access.
- **6.2 Environmental precautions:** No special measures required.
- **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Dispose contaminated material as waste according to section 13.
Send for recovery or disposal in suitable receptacles.

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6.4 Reference to other sections

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Handle with care. Avoid jolting, friction and impact.
- **Information about fire - and explosion protection:**
 - Protect from heat.
 - Emergency cooling must be available in case of nearby fire.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 - Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Store away from flammable substances.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see section 7.
- **8.1 Control parameters**

Ingredients with limit values that require monitoring at the workplace:

100-21-0 terephthalic acid

TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust; **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³

57-50-1 sucrose, pure

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust; **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ total dust

(Cont'd. on page 6)

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598-62-9 manganese carbonate

PEL (USA)	Ceiling limit: 5 mg/m ³ as Mn
REL (USA)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ as Mn
TLV (USA)	Long-term value: 0,02* 0,1* mg/m ³ as Mn; *respirable **inhalable fraction
EL (Canada)	Long-term value: 0,2 mg/m ³ as Mn; R

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.

· 8.2 Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

- **Respiratory protection:** Not required under normal conditions of use.

· Protection of hands:

Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Safety glasses

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment**

No further relevant information available.

· Risk management measures

See Section 7 for additional information.

Organizational measures should be in place for all activities involving this product.

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No further relevant information available.

(Cont'd. from page 6)

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Solid metal container containing solid contents.

Colour: According to product specification

· Odour: Odourless

· Odour threshold: Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/Melting range: Not determined.

Boiling point/Boiling range: Not determined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not determined.

· Auto/Self-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Self-igniting: Product is not self-igniting.

· Danger of explosion: Heating may cause an explosion.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapour pressure: Not applicable.

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with
water:

Insoluble.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· 9.2 Other information: No further relevant information available.

(Cont'd. on page 8)

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SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Fire or projection hazard.
Toxic fumes may be released if heated above the decomposition point.
Reacts with strong acids and alkali.
Reacts violently with oxidising agents.
- **10.4 Conditions to avoid** Sources of ignition, open flame, incompatible materials.
- **10.5 Incompatible materials:** Oxidizers
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Nitrogen oxides
Sulphur oxides (SOx)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

3811-04-9 potassium chlorate

Oral	LD50	1870 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Not a skin irritant in unused form. Vapors/particles from used product are possibly irritating to skin.
- **Serious eye damage/irritation**
Not an eye irritant in unused form. Vapors/particles from used product are possibly irritating to eyes.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
Normal handling of the undeployed product poses little or no health hazards, One should avoid inhalation by wearing appropriate respiratory protection when exposed to the chemical ingredients of the product above listed TLV's or when exposed to the post ignition by-products. This product is a cansister which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. When the product is used, particles may be generated which may be irritating to the eyes and the respiratory tract.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

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- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** May be accumulated in organism
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary
Harmful to aquatic organisms
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT, ADR, IMDG, IATA** UN0303

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<ul style="list-style-type: none"> · 14.2 UN proper shipping name · DOT · ADR · IMDG, IATA 	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge 0303 AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, 0303 AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge,
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · DOT, ADR, IMDG, IATA <div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Class · Label 	1.4 1.4G
<ul style="list-style-type: none"> · 14.4 Packing group · DOT, ADR, IMDG, IATA 	II
<ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: 	No
<ul style="list-style-type: none"> · 14.6 Special precautions for user · EMS Number: · Segregation groups 	Not applicable. F-B,S-X Chlorates
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	0 Code: E0 Not permitted as Excepted Quantity
<ul style="list-style-type: none"> · UN "Model Regulation": 	UN0303, AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, 0303, 1.4G

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

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· **Section 313 (Specific toxic chemical listings):**

598-62-9 | manganese carbonate

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

Present in trace quantities.

592-87-0 | lead dithiocyanate

10294-40-3 | barium chromate

7758-97-6 | lead chromate

· **Chemicals known to cause reproductive toxicity for females:**

10294-40-3 | barium chromate

7758-97-6 | lead chromate

· **Chemicals known to cause reproductive toxicity for males:**

10294-40-3 | barium chromate

7758-97-6 | lead chromate

· **Chemicals known to cause developmental toxicity:**

Present in trace quantities.

10294-40-3 | barium chromate

7758-97-6 | lead chromate

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

598-62-9 | manganese carbonate

D

· **IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH)**

57-50-1 | sucrose, pure

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

598-62-9 | manganese carbonate

· **Canadian Ingredient Disclosure list (limit 1%)**

100-21-0 | terephthalic acid

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- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I**

None of the ingredients are listed.

- **Other regulations, limitations and prohibitive regulations**

- **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H201 Explosive; mass explosion hazard.

H271 May cause fire or explosion; strong oxidiser.

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H411 Toxic to aquatic life with long lasting effects.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Expl. 1.1: Explosives, Division 1.1

Expl. 1.4: Explosives, Division 1.4

Ox. Sol. 1: Oxidising Solids, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

- **Sources**

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

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Website: www.chemtelinc.com

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** 37/40MM 60 Cal. Stinger Rubber Ball Smokeless Round
- **Article number:** 6297
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Explosive product.
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **Further information obtainable from:** Customer Care Department
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.
-  exploding bomb
Expl. 1.4 H204 Fire or projection hazard.
-  environment
Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
R5-44: Heating may cause an explosion. Risk of explosion if heated under confinement.
- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

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• **2.2 Label elements**

• **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

• **Hazard pictograms**



This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS).



GHS01 GHS09

• **Signal word** Warning

• **Hazard statements**

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.

H204 Fire or projection hazard.

H411 Toxic to aquatic life with long lasting effects.

• **Precautionary statements**

The following Precautionary Statements are applicable only to the general GHS regulations and not the specific CLP regulation: P374.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P250 Do not subject to grinding/shock/friction.

P373 DO NOT fight fire when fire reaches explosives.

P374 Fight fire with normal precautions from a reasonable distance.

P372 Explosion risk in case of fire.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Additional information:**

Can become highly flammable in use.

• **Hazard description:**

• **WHMIS-symbols:**

F - Dangerously reactive material



• **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 0

Reactivity = 3

• **HMIS-ratings (scale 0 - 4)**



Health = 0

Fire = 0

Reactivity = 3

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Warning: Contains lead salt(s). Long-term health hazard.

• **HMIS Long Term Health Hazard Substances**

122-39-4	diphenylamine
15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide

• **2.3 Other hazards**

• **Results of PBT and vPvB assessment**

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

• **Explosive Product Notice**

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES - The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.






WARNING - All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

SECTION 3: Composition/information on ingredients

• **3.2 Mixtures**

• **Description:** Mixture of substances listed below with nonhazardous additions.

• **Dangerous components:**

CAS: 9004-70-0 EC number: 603-037-0	Nitrocellulose, colloided, granular  E R3  Expl. 1.1, H201	50-100%
CAS: 85-98-3 EINECS: 201-645-2	1,3-diethyldiphenylurea  Xn R22  Acute Tox. 4, H302  Aquatic Chronic 3, H412	5-10%
CAS: 7439-89-6 EINECS: 231-096-4	iron substance with a Community workplace exposure limit	1-5%
CAS: 7440-50-8 EINECS: 231-159-6	copper substance with a Community workplace exposure limit	1-5%

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








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CAS: 122-39-4 EINECS: 204-539-4 Index number: 612-026-00-5	diphenylamine  T R23/24/25;  N R50/53 R33 -----  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331  STOT RE 2, H373  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	< 1,0%
CAS: 7440-66-6	zinc metal  N R50/53 -----  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	< 1,0%
CAS: 15245-44-0 EINECS: 239-290-0 Index number: 609-019-00-4	lead 2,4,6-trinitro-m-phenylene dioxide  T Repr. Cat. 1, 3 R61;  Xn R62-20/22;  E R3;  N R50/53 R33 -----  Unst. Expl., H200  Repr. 1A, H360Df; STOT RE 2, H373  Aquatic Acute 1, H400; Aquatic Chronic 1, H410  Acute Tox. 4, H302; Acute Tox. 4, H332	< 1,0%
• SVHC		
15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide	
• Additional information: For the wording of the listed risk phrases refer to section 16.		

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Unlikely route of exposure.
Brush off loose particles from skin.
If skin irritation is experienced, consult a doctor.
- **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** Blast injury if mishandled.
- **Hazards** Danger of blast or crush-type injuries.
- **4.3 Indication of any immediate medical attention and special treatment needed**
Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

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SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
Product may explode if burned in confined space. Individual cartridges may explode. Mass explosion of many cartridges at once is unlikely.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Cool endangered receptacles with water spray.
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
Eliminate all ignition sources if safe to do so.
Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions. Individual devices will randomly explode. Will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. In unusual cases, shrapnel may be thrown from exploding devices under containment. See 2008 Emergency response Guidebook for further information.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTEL AT 1-800-255-3924. Spills of this material should be handled carefully. Do not subject materials to mechanical shock or extreme heat. A spill of this material will normally not require emergency response team capabilities.
Wear protective equipment. Keep unprotected persons away.
Remove persons from danger area.
Ensure adequate ventilation
Protect from heat.
Isolate area and prevent access.
- **6.2 Environmental precautions:** No special measures required.
- **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Dispose contaminated material as waste according to item 13.
Send for recovery or disposal in suitable receptacles.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Handle with care. Avoid jolting, friction and impact.
- **Information about fire - and explosion protection:**
 - Protect from heat.
 - Emergency cooling must be available in case of nearby fire.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 - Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Store away from flammable substances.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

· Ingredients with limit values that require monitoring at the workplace:

7439-89-6 iron

EV (Canada)	Long-term value: 1* 5** mg/m ³ as iron;*salts, water-soluble;**welding fume
-------------	---

7440-50-8 copper

PEL (USA)	Long-term value: 1* 0,1** mg/m ³ as Cu *dusts and mists **fume
REL (USA)	Long-term value: 1* 0,1** mg/m ³ as Cu *dusts and mists **fume
TLV (USA)	Long-term value: 1* 0,2** mg/m ³ *dusts and mists; **fume; as Cu
EL (Canada)	Long-term value: 1* 0,2** mg/m ³ *dusts and mists; **fume, as Cu
EV (Canada)	Long-term value: 0,2* 1** mg/m ³ as copper, *fume;**dust and mists

122-39-4 diphenylamine

REL (USA)	Long-term value: 10 mg/m ³
TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10 mg/m ³
EV (Canada)	Long-term value: 10 mg/m ³

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15245-44-0 lead 2,4,6-trinitro-m-phenylene dioxide

EV (Canada)	Long-term value: 0,05 mg/m ³ as Pb, Skin (organic compounds)
-------------	--

- **DNELs** No further relevant information available.
 - **PNECs** No further relevant information available.
 - **Additional information:** The lists valid during the making were used as basis.
 - **8.2 Exposure controls**
 - **Personal protective equipment:**
 - **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
 - **Respiratory protection:** Not required under normal conditions of use.
 - **Protection of hands:**
Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
 - **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
 - **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **Eye protection:**
- 

Safety glasses
- **Body protection:** Protective work clothing
 - **Limitation and supervision of exposure into the environment**
No further relevant information available.
 - **Risk management measures**
See Section 7 for additional information.
Organizational measures should be in place for all activities involving this product.
No further relevant information available.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - Form:** Solid metal container containing liquid and solid contents.
 - Colour:** According to product specification

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- **Odour:** Odourless
- **Odour threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**
- **Melting point/Melting range:** Not Determined.
- **Boiling point/Boiling range:** Undetermined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not determined.
- **Auto/Self-ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Self-igniting:** Product is not self-igniting.
- **Danger of explosion:** Heating may cause an explosion.
- **Explosion limits:**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Vapour pressure:** Not applicable.
- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
- **Dynamic:** Not applicable.
- **Kinematic:** Not applicable.
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Danger of explosion.
Toxic fumes may be released if heated above the decomposition point.
Reacts with strong acids and alkali.
Reacts violently with oxidizing agents.
- **10.4 Conditions to avoid** Sources of ignition, open flame, incompatible materials.

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- **10.5 Incompatible materials:** Oxidizers
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Nitrogen oxides
Sulphur oxides (SO_x)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

122-39-4 diphenylamine

Oral	LD50	1120 mg/kg (rat)
------	------	------------------

15245-44-0 lead 2,4,6-trinitro-m-phenylene dioxide

Oral	LD50	650 mg/kg (rat)
------	------	-----------------

- **Primary irritant effect:**
- **on the skin:**
Not a skin irritant in unused form. Vapors/particles from used product are possibly irritating to skin.
- **on the eye:**
Not an eye irritant in unused form. Vapors/particles from used product are possibly irritating to eyes.

- **Additional toxicological information:**

Normal handling of the undeployed product poses little or no health hazards, One should avoid inhalation by wearing appropriate respiratory protection when exposed to the chemical ingredients of the product above listed TLV's or when exposed to the post ignition by-products. This product is a canister which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. When the product is used, particles may be generated which may be irritating to the eyes and the respiratory tract.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** May be accumulated in organism
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary

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Harmful to aquatic organisms

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

• **12.5 Results of PBT and vPvB assessment**

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

• **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

• **13.1 Waste treatment methods**

• **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

• **Uncleaned packaging:**

• **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

• **14.1 UN-Number**

• **DOT, ADR, IMDG, IATA**

UN0012

• **14.2 UN proper shipping name**

• **DOT, IMDG, IATA**

• **ADR**

CARTRIDGES FOR WEAPONS, INERT PROJECTILE
0012, CARTRIDGES FOR WEAPONS, INERT
PROJECTILE

• **14.3 Transport hazard class(es)**

• **DOT, ADR, IMDG**



• **Class**

1.4

• **Label**

1.4S

• **IATA**



• **Class**

1.4

• **Label**

1.4S

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- **14.4 Packing group** II
- **DOT, ADR, IMDG, IATA**
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
Symbol (fish and tree)
- **Special marking (ADR):** Symbol (fish and tree)
- **14.6 Special precautions for user** Not applicable.
- **EMS Number:** F-A,S-Q
- **Segregation groups** Heavy metals and their salts (including their organometallic compounds)
- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** UN0012, CARTRIDGES FOR WEAPONS, INERT PROJECTILE, 1.4S, II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

7440-50-8 copper

122-39-4 diphenylamine

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

15245-44-0 lead 2,4,6-trinitro-m-phenylene dioxide

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

15245-44-0 lead 2,4,6-trinitro-m-phenylene dioxide

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

7440-50-8 copper

D

7440-66-6 zinc metal

D, I, II

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· IARC (International Agency for Research on Cancer)	
---	--

None of the ingredients is listed.	
------------------------------------	--

· TLV (Threshold Limit Value established by ACGIH)	
---	--

122-39-4	diphenylamine	A4
----------	---------------	----

· NIOSH-Ca (National Institute for Occupational Safety and Health)	
---	--

None of the ingredients is listed.	
------------------------------------	--

· Canada	
-----------------	--

· Canadian Domestic Substances List (DSL)	
--	--

All ingredients are listed.	
-----------------------------	--

· Canadian Ingredient Disclosure list (limit 0.1%)	
---	--

122-39-4	diphenylamine
----------	---------------

· Canadian Ingredient Disclosure list (limit 1%)	
---	--

7440-50-8	copper
-----------	--------

· Other regulations, limitations and prohibitive regulations	
---	--

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.	
--	--

· Substances of very high concern (SVHC) according to REACH, Article 57	
--	--

15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide
------------	---

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.	
--	--

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases	
---------------------------	--

H200	Unstable explosives.
H201	Explosive; mass explosion hazard.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H360Df	May damage the unborn child. Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
.....	
R20/22	Harmful by inhalation and if swallowed.
R22	Harmful if swallowed.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R3	Extreme risk of explosion by shock, friction, fire or other sources of ignition.

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- R33 Danger of cumulative effects.
 R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R61 May cause harm to the unborn child.
 R62 Possible risk of impaired fertility.

• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 WHMIS: Workplace Hazardous Materials Information System (Canada)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 Expl. 1.1: Explosives, Division 1.1
 Expl. 1.4: Explosives, Division 1.4
 Unst. Expl.: Explosives, Unstable explosives
 Acute Tox. 3: Acute toxicity, Hazard Category 3
 Acute Tox. 4: Acute toxicity, Hazard Category 4
 Repr. 1A: Reproductive toxicity, Hazard Category 1A
 STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
 Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
 Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
 Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3



• **Sources**

SDS Prepared by:
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MATERIAL SAFETY DATA SHEET

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SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 40mm Skat-Shell Round Smoke		DATE: March 11, 2010	
PRODUCT NUMBER: 6173			
TRADE NAME: 40mm Skat-Shell Round Smoke GENERAL USE: Practice Round CHEMICAL FAMILY: Incendiary PRODUCT DESCRIPTION: Canister containing white powder. (Explosive Device)		 DEFENSE TECHNOLOGY	
MANUFACTURED FOR: Safariland L.L.C.		DATE PREPARED: March 11, 2010	
		SUPERSEDES: August 11, 2008	
ADDRESS (NUMBER, STREET, P.O. BOX): 13386 International Parkway		TELEPHONE NUMBER FOR INFORMATION / Customer Service: 904-741-5400	
(CITY, STATE AND ZIP CODE): Jacksonville, FL 32218			
COUNTRY: USA		CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBER  1-800-255-3924 01-813-248-0585 North America Toll Free International	

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION! EXPLOSIVE/DEFLAGRATING (FAST BURN RATE) PRODUCT. KEEP AWAY FROM HEAT. DO NOT SUBJECT TO MECHANICAL OR ELECTRICAL SHOCK. EXPLODING CARTRIDGES MAY EJECT SHRAPNEL AT HIGH VELOCITIES. PARTICLES FROM FIRING MAY BE HARMFUL IF INHALED. DO NOT TAKE INTERNALLY. COMPONENTS MAY HARM ENVIRONMENT.

Individual cartridges may ignite if the primer is struck or if the cartridge is exposed to excess heat. Oxides of Barium, Lead, Antimony, Aluminum, Magnesium, Nitrogen, Carbon, and Sulfur. Lead and Antimony fumes may also be produced on thermal decomposition.

POTENTIAL HEALTH EFFECTS

INHALATION:

Both pre and post ignition ingredients are hazardous and capable of producing long term health effects due primarily to the presence of zinc, lead, antimony in the product. While normal handling of the undetonated product poses little or no health hazards, one should avoid inhalation by wearing appropriate respiratory protection when exposed to the chemical ingredients of the product above listed TLV's or when exposed to the post ignition by-products. This product is a finished cartridge or canister which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. When the product is used, particles may be generated which may be slightly irritating to the eyes and the respiratory tract. The particles may contain trace amounts of the following harmful substances:

Lead: Ingestion of large amounts of lead can cause abdominal pain, constipation, cramps, nausea and/or vomiting. Chronic exposure to lead can cause kidney damage, anemia, reproductive effects, developmental effects and permanent nervous system damage in humans including changes in cognitive function. It is unlikely that the amount of particles that someone would be exposed to from firing a loaded round would be sufficient to cause any of these effects.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: There are no medical conditions known to be aggravated by exposure to this product in its solid form. Exposure to lead compounds in the primer can aggravate anemia, cardiovascular and respiratory disease.

SKIN:

No exposure to chemical hazards anticipated with normal handling procedures.

EYES:

No exposure to chemical hazards anticipated with normal handling procedures.

INGESTION:

No exposure to chemical hazards anticipated with normal handling procedures. Contents of this product are toxic by ingestion and in the unlikely event this should occur immediate medical attention is advised.

CARCINOGENICITY:

NTP? Yes-Lead cpds.	IARC MONOGRAPHS? Yes-Lead products (2B)	OSHA REGULATED? Yes- Lead
CALIFORNIA, Prop.65? Yes, Lead compounds and Antimony trioxide formed during use of product		ESIS NOTATION? Yes

MATERIAL SAFETY DATA SHEET

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PRODUCT NAME:	40mm Skat-Shell Round Smoke				
PRODUCT NUMBER:	6173		DATE:	March 11, 2010	
SECTION 3 - HAZARDOUS INGREDIENTS					
<i>Powder Charge- Product will contain 1 or more of the following hazardous components</i>					
Hazardous Components	% (by Weight)	CAS #	EINECS #	Hazard Symbol	RISK PHRASES (Full Text Section 15)
Potassium perchlorate	NR	7778-74-7	231-912-9	Xn, O	R9, R22
Potassium nitrate	NR	7757-79-1	231-818-8	Xn, O	R8, R36/37/38
Sulfur	100	7704-34-9	231-722-6	F, Xi	R11, 36/37/38
Charcoal	NR	16291-96-6	240-383-3	None	None
Rosin	NR	8050-09-7	232-475-7	Xi	R43
Graphite	NR	7782-42-5	231-955-3	None	None
<i>Primer - Product will contain 1 or more of the following hazardous components</i>					
Normal Lead styphnate	NR	15245-44-0	239-290-0	E,T,N	R3, R20/22, R33, R50/53, R61, R62
Basic Lead styphnate	NR	12403-82-6	235-642-2	E,T,N	R3, R20/22, R33, R50/53, R61, R62
Lead Azide	NR	13424-46-9	236-542-1	E,T,N	R3, R20/22, R33, R50/53, R61, R62
Lead Thiocyanate	NR	592-87-0	209-774-6	T	R23/24/25
Nitrocellulose	NR	9004-70-0	NR	E,F	R1, R2, R5 ,R11
Tetracene	NR	109-27-3	203-659-4	E	R3, R5, R20/22
Potassium chlorate	NR	3811-04-9	223-289-7	Xn, O	R9, R20/22
Potassium nitrate	NR	7757-79-1	231-818-8	Xn, O	R8, R36/37/38
Barium nitrate	NR	10022-31-8	233-020-5	T, O	R8, R23/24/25
Antimony Sulfide	NR	1345-04-6	231-146-5	Xn, N	R20/22, R51/53
Zinc	NR	7440-66-6	231-175-3	N	R17, 50/53
<i>Remainder of Product - Product will contain 1 or more of the following hazardous components</i>					
Potassium Chlorate	NR	3811-04-9	231-104-6	F, Xn, N	R9, R20/22, R51/53
Sugar	NR	57-50-1	200-334-9	None	None
Magnesium Carbonate	NR	546-93-0	208-915-9	None	None
Nitrocellulose	NR	9004-70-0	NR	E, F	R1, R2, R5,R11
Terephthalic Acid	NR	100-21-0	202-830-0	None	None
Tin	NR	7440-31-5	231-141-8	F, Xi	R11, R36/37/38
Zinc	NR	7440-66-6	231-175-3	N	R17, 50/53
Chromium	NR	7440-47-3	231-157-5	None	None
Copper	NR	7440-50-8	231-159-6	None	None
Iron	NR	7439-89-6	231-096-4	None	None
Aluminum	NR	7429-90-5	231-072-3	F	R15,R17
<p>NOTES: This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS), and European Union Directive 1907/2006 (REACH). Hazard symbols and risk phrases are based on maximum listed concentration of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS) or the European (GHS) directive 1907/2006 and are considered trade secrets under US Federal Law (29CFR and 40CFR), Canadian Law (Health Canada Legislation), and European Union Directive 67/548/EEC.</p>					

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PRODUCT NAME:	40mm Skat-Shell Round Smoke	DATE:	March 11, 2010
PRODUCT NUMBER:	6173		

SECTION 4 - FIRST AID MEASURES

INHALATION:

For symptoms of lung irritation occur (coughing, wheezing or breathing difficulty), remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep affected person warm and at rest. Get medical attention.

EYES:

Remove contact lenses, then wash for 15 minutes with clean potable water lifting upper and lower lids occasionally. Seek medical attention if irritation persists.

SKIN:

Wash with plenty of soap and water. Seek medical attention if delayed dermatitis develops. For contact with burning (ignited) particles, medical treatment may be needed for thermal burns.

INGESTION:

Contact medical authorities immediately. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs naturally, have victim lean forward to avoid aspiration of regurgitant. Give 1-2 glasses of water to victim if victim is conscious and able to swallow and seek immediate medical assistance. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

GENERAL HAZARDS:

Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions. Individual devices will randomly explode. Will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. Shrapnel may be thrown from exploding devices under containment. See 2008 Emergency response Guidebook for further information.

EXTINGUISHING MEDIA:

Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.

FIRE FIGHTING PROCEDURES:

In case of fire, use normal fire fighting equipment. Protection concerns must also address the potential of the physical characteristic of this product as explosive. Quarantine area for at least 1500 feet from fires involving product.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

If fire reaches cargo, do not fight; withdraw personnel to safe distance. Evacuate all persons, including emergency responders from the area for 1500 feet (1/3 mile) in all directions.

HAZARDOUS COMBUSTION PRODUCTS:

Metal Compounds, Carbon Monoxide, Carbon Dioxide, Nitrous Oxides, Various complex oxides of metals, Nitrogen.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTEL AT 1-800-255-3924. Spills of this material should be handled carefully. Do not subject materials to mechanical shock or extreme heat. A spill of this material will normally not require emergency response team capabilities.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

HANDLING: Cartridge may detonate or burn if case is punctured or severely damaged.
STORAGE: Avoid storage near extreme heat, ignition sources or open flame.
Shelf Life Limitations: Not known
Incompatible Materials for Packaging: None known
Incompatible Materials for Storage or Transport: Acids, Class A & B explosives, strong oxidizers, and caustics
CONDITIONS TO AVOID: Mechanical impact or shock, electrical discharge, high energy EM fields (radar stations).

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PRODUCT NAME: 40mm Skat-Shell Round Smoke		DATE: March 11, 2010	
PRODUCT NUMBER: 6173			
SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION			
Hazardous Components	CAS #	ACGIH Exposure Limits	OSHA Exposure Limits
Antimony Sulfide	1345-04-6	0.5 mg/m3	0.5 mg/m3
Arsenic	7440-38-2	0.01 mg/m3	0.01 mg/m3
Barium nitrate	10022-31-8	0.5 mg/m3	0.5 mg/m3
Calcium Carbonate	1317-65-3	10 mg/m3	5 mg/m3
Charcoal	7782-42-5	2 mg/m3	2.5 mg/m3 (respirable dust)
Copper	7440-50-8	0.2mg/m3 (fume), 1mg/m3 (dusts and mists)	0.1mg/m3 (fume) 1mg/m3 (dusts & mists)
Dibutyl phthalate	84-74-2	5 mg/m3	5 mg/m3
Diphenylamine	122-39-4	10 mg/m3	10 mg/m3
Ethyl Acetate	141-78-6	400 ppm (1400 mg/m3)	400 ppm (1400 mg/m3)
Glass Powder	65997-17-3	10 mg/m3 (particulate)	15 mg/m3
Graphite	7782-42-5	2 mg/m3	2.5 mg/m3 (respirable dust)
Lead	7439-92-1	0.05mg/m3 (Ceiling)	0.05mg/m3 (Ceiling)
Magnesium Carbonate	546-93-0	NE	15 mg/m3 total , 5 mg/m3 respirable
Manganese	7439-96-5	0.2 mg/m3	5 mg/m3 (Ceiling)
Nickel	7440-02-0	1.5 mg/m3 (inhalable)	1 mg/m3
Graphite	7782-42-5	2 mg/m3 (respirable)	NE
Nickel	7440-02-0	1.5 (respirable)	1
Sugar	57-50-1	5 mg/m3 (respirable)(NIOSH)	15 mg/m3 total , 5 mg/m3 respirable
Sulfur	7704-34-9	15 mg/m3	15 mg/m3
Terephthalic Acid	100-21-0	10 mg/m3	NE
Tin	7440-31-5	2 mg/m3	2 mg/m3
Tin Dioxide	18282-10-5	2 mg/m3	2 mg/m3 (as Tin)
Tungsten	7440-33-7	5 mg/m3 TWA, 10 mg/m3 (STEL)	NE
Components not listed above do not have published exposure limits from ACGIH or OSHA.			
PERSONAL PROTECTION			
RESPIRATORY PROTECTION: Respiratory protection not normally needed. Mask should be worn while cleaning debris from weapons			
PROTECTIVE GLOVES: None required for normal handling.			
EYE PROTECTION: Safety glasses with side shields required.			
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Local exhaust ventilation is recommended if significant dusting occurs or fumes are generated. Otherwise, use general exhaust ventilation. Use hearing protection with this product.			
WORK / HYGIENIC PRACTICES: Avoid breathing fumes from ignition. DO NOT EAT/DRINK/SMOKE WHILE HANDLING PRODUCT!!!			

MATERIAL SAFETY DATA SHEET

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PRODUCT NAME: 40mm Skat-Shell Round Smoke		DATE: March 11, 2010	
PRODUCT NUMBER: 6173			
SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES			
APPEARANCE AND ODOR Canister containing white powder. (Explosive Device)		VAPOR PRESSURE Not applicable.	
pH Not applicable.		SPECIFIC GRAVITY (WATER = 1) Not applicable	
MELTING POINT Not applicable.		SOLUBILITY IN WATER Insoluble - some components are soluble in water	
FLASH POINT Not applicable.		VISCOSITY Not applicable	
FLAMMABLE LIMITS LEL: None UEL: None		EXPLOSIVE!! VAPOR DENSITY (AIR = 1) Not applicable.	
AUTOIGNITION TEMPERATURE NR		EVAPORATION RATE (WATER = 1) Not applicable.	
VOLATILE ORGANIC COMPOUND (VOC) INFORMATION Not applicable.			
NOTES:			
SECTION 10 - STABILITY AND REACTIVITY			
STABILITY Stable under normal temperatures and pressure.		STABLE X CONDITIONS TO AVOID: Cartridge may detonate if case is punctured or severely damaged.	
INCOMPATIBILITY (MATERIALS TO AVOID): Acids, Class A & B explosives, strong oxidizers, and caustics.			
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Nitrogen oxides, carbon monoxide, lead oxides, carbon dioxide, lead dust/fume.			
HAZARDOUS POLYMERIZATION: Will not occur.		CONDITIONS TO AVOID: None related to polymerization.	
SECTION 11 - TOXICOLOGICAL INFORMATION			
Complete Product			
Oral LD ₅₀	NA		
Dermal LD ₅₀	NA		
Inhalation LC ₅₀	Not applicable for product. Particles generated from use may be irritating or slightly toxic.		
Irritation	Not a skin or eye irritant as a loaded round. Particulate dusts and gases from spent round may be a mild respiratory / eye irritant.		
Product Components			
Hazardous Components	CAS #	LD50 of Ingredient (Oral, Rat - unless otherwise specified)	LC50 of Ingredient (Inhalation, Rat - unless otherwise specified)
Antimony	7440-36-0	7 g/kg	Not Established
Antimony Sulfide	1345-04-6	7000 mg/kg	Not Established
Basic Lead styphnate	12403-82-6	650 mg/kg	Not Established
Bismuth	7440-69-9	5000 mg/kg	Not Established
Boron	7440-42-8	650 mg/kg	Not Established
Chromium	7440-47-3	5045 mg/kg	Not Established
Copper	7440-50-8	413 mg/kg (oral, mouse)	> 1000 mg/m3
Dibutyl phthalate	84-74-2	8 g/kg	4250 mg/m3
Diphenylamine	122-39-4	1120 mg/kg	Not Established
Ethyl Acetate	141-78-6	5620 mg/kg	200 gm/m3
Iron	7439-89-6	30 g/kg	Not Established
Lead	7439-92-1	Not Established	IARC: Group 2A carcinogen
Normal Lead styphnate	15245-44-0	650 mg/kg	Not Established
Rosin	8050-09-7	3.0 mg/kg	110 mg/m3

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PRODUCT NAME:	40mm Skat-Shell Round Smoke	DATE:	March 11, 2010
PRODUCT NUMBER:	6173		

Product Components (Continued)

Hazardous Components	CAS #	LD50 of Ingredient (Oral, Rat - unless otherwise specified)	LC50 of Ingredient (Inhalation, Rat - unless otherwise specified)
Sugar	57-50-1	29,700 mg/kg	110 mg/m3
Potassium chlorate	3811-04-9	1870 mg/kg	Not Established
Magnesium Carbonate	546-93-0	8000 mg/kg	Not Reported
Tetracene	109-27-3	1 – 3 g/kg	Not Established
Terephthalic Acid	100-21-0	64000 mg/kg	Not Established
Tin Dioxide	18282-10-5	>20 gm/kg	Not Established
Zinc	7440-66-6	> 8,437 mg/kg	Not Established

No LD50 or LC50 information is available for the following components: Aluminum, Calcium Silicide, Charcoal, Glass Powder, Graphite, Lead, Lead Azide, Lead Thiocyanate, Magnesium, Nickel, Nitrosodiphenylamine, Polyester Adipate, Potassium perchlorate, Tin, Tungsten

SECTION 12 - ECOLOGICAL INFORMATION

No data is available on this product, but leachates of metal components may be harmful or toxic to aquatic life and waterfowl. Collection and careful disposal of spent rounds is highly advisable. Lead and nickel are especially problematic when introduced into many ecosystems.



SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous. Damaged materials pose a danger to anyone in the immediate area; consult experts for disposal of damaged products.

SECTION 14 - TRANSPORT INFORMATION



PROPER SHIPPING NAME: Ammunition Smoke, Explosive 1.4G, PGII, UN0303

DOT HAZARD CLASS / Pack Group: Explosives, 1.4G/ II REFERENCE: 49CFR UN / NA IDENTIFICATION NUMBER: UN0303 LABEL: Explosives 1.4G	IATA HAZARD CLASS / Pack Group: 1.4G / II, 75Kg Cargo Aircraft Only IMDG HAZARD CLASS: Explosives, 1.4G/ II RID/ADR Dangerous Goods Code: Explosives, 1.4G/ II UN TDG Class / Pack Group: Explosives, 1.4G/ II Hazard Identification Number (HIN): NA
HAZARD SYMBOLS: <div style="display: flex; justify-content: space-around; align-items: center;">   </div>	

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

MATERIAL SAFETY DATA SHEET

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PRODUCT NAME:	40mm Skat-Shell Round Smoke	
PRODUCT NUMBER:	6173	DATE: March 11, 2010
SECTION 15 - REGULATORY INFORMATION		
TSCA (USA - Toxic Substance Control Act): Components are listed under Section 8b.		
SARA TITLE III (USA - Superfund Amendments and Reauthorization Act):		
Acute Health:	YES	Chronic Health: YES
Fire:	YES	Sudden Release of Pressure: YES
Reactive:	NO	
SARA 313 REPORTABLE INGREDIENTS: Copper, Zinc (fume or dust), Lead, Antimony.		
CERCLA (USA - Comprehensive Response Compensation and Liability Act): Copper, R.Q.= 5000 lbs.; Zinc, R.Q. = 1000 lbs.; Lead, R.Q. = 10 lbs.; Antimony, R.Q. = 5000 lbs. (No reporting is required if diameter of the pieces of metal is equal to or exceeds 100 micrometers (0.004 inches)).		
California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: Lead Compounds / Antimony Trioxide from Use.		
State Right To Know Laws: This product contains chemicals listed on the Right-to-Know Laws of CA, FL, MA, MI, MN, NJ, PA, & RI.		
CPR (Canadian Controlled Products Regulations): Exempt under WHMIS regulations as explosive.		
IDL (Canadian Ingredient Disclosure List): Components are listed in Section 2.		
DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List): Listed or exempt on both CDSL and NDSL.		
EINECS (European Inventory of Existing Commercial Chemical Substances): Referenced.		
WGK Water Quality Index: NA for product.		
EUROPEAN (GHS) HAZARD SYMBOLS		
 		
EU RISK PHRASES		
R2: Risk of explosion by shock, friction, fire or other sources of ignition. R20/22: Harmful by inhalation and if swallowed. R33: Danger of cumulative effects. R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R61: May cause harm to the unborn child. R62: Possible risk of impaired fertility.		
EU SAFETY PHRASES		
S1/2: Keep locked up and out of the reach of children. S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S53: Avoid exposure — obtain special instructions before use. S60: This material and its container must be disposed of as hazardous waste.		

MATERIAL SAFETY DATA SHEET

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PRODUCT NAME:	40mm Skat-Shell Round Smoke	DATE:	March 11, 2010
PRODUCT NUMBER:	6173		
SECTION 16 - OTHER INFORMATION			
HMIS HAZARD RATINGS			
	HEALTH:	2	0 = INSIGNIFICANT
	FLAMMABILITY:	3	1 = SLIGHT
	PHYSICAL HAZARD:	2	2 = MODERATE
	Personal Protective Equipment: K		3 = HIGH
			4 = EXTREME

Legend:

ACGIH - American Congress of Government Industrial Hygienists , **CAS** - Chemical Abstracts Service
EINECS- European Inventory of Existing Commercial Chemical Substances
HMIS - Hazardous Materials Identification System, **IARC** - International Agency for Research on Cancer
NA - Not Available , **ND** - Not Determined, **NE** - Not Established, **NR** - Not Reported
NIOSH - National Institute for Occupational Safety and Health, **NTP** - National Toxicology Program
OSHA - Occupational Safety and Health Administration

Full R-Phrases:R1 Explosive when dry. R2 Risk of explosion by shock, friction, fire or other sources of ignition. R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition. R5 Heating may cause an explosion. R8 Contact with combustible material may cause fire. R9 Explosive when mixed with combustible material. R11 Highly flammable. R15 Contact with water liberates extremely flammable gases. R17 Spontaneously flammable in air. R20 Harmful by inhalation. R20/22 Harmful by inhalation and if swallowed. R22 Harmful if swallowed. R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R23/25 Toxic by inhalation and if swallowed. R33 Danger of cumulative effects. R36 Irritating to eyes. R36/37/38 Irritating to eyes, respiratory system and skin.

R40 Limited evidence of a carcinogenic effect. R43 May cause sensitisation by skin contact. R45 May cause cancer. R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed. R50 Very toxic to aquatic organisms. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R51/53 Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment. R61 May cause harm to the unborn child. R62 Possible risk of impaired fertility. R66 Repeated exposure may cause skin dryness or cracking. R67 Vapours may cause drowsiness and dizziness. R68 Possible risk of irreversible effects.

REVISION SUMMARY:

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The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.