

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

1 Identification

- **Product identifier**
- **Trade name:** Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch
- **Product code:**
6042 (1011981)
6042SL (1208734)
- **Recommended use and restriction on use**
- **Recommended use:** Crowd Control Device
- **Restrictions on use:** Contact manufacturer/supplier
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **Information department:** Customer Care Department
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)



2 Hazard(s) identification

- **Classification of the substance or mixture**
Expl. 1.4 H204 Fire or projection hazard.
Acute Tox. 3 H301 Toxic if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin.
Acute Tox. 3 H331 Toxic if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
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.

· Label elements

· GHS label elements

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

· Hazard pictograms:



GHS01 GHS06 GHS07 GHS08

(Cont'd. on page 2)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 1)

· **Signal word:** Danger

· **Hazard statements:**

- 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.

· **Precautionary statements:**

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

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P250 Do not subject to grinding/shock/friction.
- P260 Do not breathe dust.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing must not be allowed out of the workplace.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P284 [In case of inadequate ventilation] wear respiratory protection.
- P301+P310 If swallowed: Immediately call a poison center/doctor.
- P330 Rinse mouth.
- P302+P352 If on skin: Wash with plenty of water.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P312 Call a poison center/doctor if you feel unwell.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P370+P380 In case of fire: Evacuate area.
- P372 Explosion risk in case of fire.
- P373 DO NOT fight fire when fire reaches explosives.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

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

· **NFPA ratings (scale 0 - 4)**



Health = 4
 Fire = 0
 Reactivity = 4

· **HMIS-ratings (scale 0 - 4)**

(Cont'd. on page 3)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 2)

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

HEALTH	3	Health = *3
FIRE	0	Fire = 0
REACTIVITY	4	Reactivity = 4

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

Other hazards**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 they are dealing with a powerful force and that various devices and methods have been developed to assist them in directing this force. They should realize that this force, if misdirected, may either kill or injure both themselves and their 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, they should consult the manufacturer before use.

3 Composition/information on ingredients

Chemical characterization: Mixtures**Components:**

9004-70-0	Nitrocellulose, colloided, granular Explosive 1.1, H201	10-20%
1309-48-4	Magnesium oxide	10-20%
7757-79-1	Potassium nitrate Oxidizing Sol., H272	10-20%
69012-64-2	silica-amorphous silica fume	5-10%
55-63-0	glycerol trinitrate / nitroglycerin Unstable Explosive, H200 Flammable Liquid 2, H225 Acute Toxic 2, H300; Acute Toxic 1, H310; Acute Toxic 2, H330 STOT RE 2, H373	5-10%
2698-41-1	[(2-chlorophenyl)methylene]malononitrile Acute Toxic 3, H301; Acute Toxic 2, H330 Respiratory Sensitizer 1, H334 Acute Toxic 4, H312; Skin Irritant 2, H315; Eye Irritant 2A, H319; Skin Sensitizer 1, H317; STOT SE 3, H335	5-10%
7439-89-6	Iron	5-10%
7440-50-8	Copper	1-5%
7778-74-7	Potassium perchlorate Oxidizing Sol., H271	1-5%

(Cont'd. on page 4)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 3)

	⚠ Acute Tox. 4, H302	
7704-34-9	sulfur	1-5%
	⚠ Skin Irrit. 2, H315	
7631-86-9	Silicon dioxide	0.1-1%
1314-23-4	zirconium oxide	0.1-1%
8050-09-7	Rosin	0.1-1%
	⚠ Skin Sens. 1, H317	
122-39-4	diphenylamine	0.1-1%
	⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	
	⚠ STOT RE 2, H373	
15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate	0.1-1%
	⚠ Unst. Expl., H200	
	⚠ Repr. 1A, H360; STOT RE 2, H373	
	⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	
10022-31-8	barium nitrate	0.1-1%
	⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	
1345-04-6	antimony sulphide	0.1-1%

· **Additional information:**

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

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

· **Notable Trace Components (< 0.1% w/w)**

15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate
	⚠ Unst. Expl., H200
	⚠ Repr. 1A, H360; STOT RE 2, H373
	⚠ Acute Tox. 4, H302; Acute Tox. 4, H332
592-87-0	lead dithiocyanate
	⚠ Carc. 2, H351; Repr. 1A, H360; STOT RE 2, H373
	⚠ Acute Tox. 4, H302; Acute Tox. 4, H332

4 First-aid measures

· **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 apparatus 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.

Brush off loose particles from skin.

(Cont'd. on page 5)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 4)

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; immediately call for medical help.

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

Asthma attacks

Blast injury if mishandled.

Allergic reactions

May cause respiratory irritation.

Breathing difficulty

Coughing

Causes eye irritation.

Irritant to skin and mucous membranes.

· **Danger:**

May cause sensitisation by inhalation and skin contact.

Danger of blast or crush-type injuries.

Harmful in contact with skin.

Danger of impaired breathing.

Toxic if inhaled.

Toxic if swallowed.

· **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.

5 Fire-fighting measures

· **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.

· **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.

· **Advice for firefighters**

· **Protective equipment:**

(Cont'd. on page 6)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 5)

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 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.

6 Accidental release measures

· **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.

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

· **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.

Clean the affected area carefully; suitable cleaners are:

Warm water and cleansing agent

· **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.

Avoid breathing dust.

Use only in well ventilated areas.

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

Protect from heat.

Keep respiratory protective device available.

Emergency cooling must be available in case of nearby fire.

(Cont'd. on page 7)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 6)

- **Conditions for safe storage, including any incompatibilities**
- **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.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· Control parameters

· Components 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
LMPE (Mexico)	Long-term value: 10* mg/m ³ A4, *fracción respirable

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
LMPE (Mexico)	Long-term value: 2 mg/m ³ (j)

55-63-0 glycerol trinitrate / nitroglycerin

PEL (USA)	Ceiling limit value: 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

(Cont'd. on page 8)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 7)

LMPE (Mexico)	Skin Long-term value: 0.05 ppm PIEL
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) NIC-0.39* mg/m ³ , (0.05) NIC-0.05* ppm *inhalable fraction and vapor; Skin
EL (Canada)	Ceiling limit value: 0.05 ppm Skin, S(D)
EV (Canada)	Ceiling limit value: 0.4 mg/m ³ , 0.05 ppm Skin
LMPE (Mexico)	Ceiling limit value: 0.05 ppm A4, PIEL
7439-89-6 Iron	
EV (Canada)	Long-term value: 1* 5** mg/m ³ as iron; *salts, water-soluble; **welding fume
LMPE (Mexico)	Long-term value: 1 mg/m ³
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
LMPE (Mexico)	Long-term value: 0.2* 1** mg/m ³ *humo (como Cu); **polvo y niebla (como Cu)
7631-86-9 Silicon dioxide	
NIOSH REL (USA)	Long-term value: 6 mg/m ³
OSHA PEL (USA)	Long-term value: 80 mg/m ³
1314-23-4 zirconium oxide	
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

(Cont'd. on page 9)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 8)

EL (Canada)	as Zr Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³
LMPE (Mexico)	as Zr Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ A4; como Zr
8050-09-7 Rosin	
TLV (USA)	DSEN, RSEN, L
EL (Canada)	S(D), S(R)
LMPE (Mexico)	SEN, (L)
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
15245-44-0 lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate	
EV (Canada)	Long-term value: 0.05 mg/m ³ as Pb, Skin (organic compounds)
10022-31-8 barium nitrate	
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
LMPE (Mexico)	Long-term value: 0.5 mg/m ³ A4; como 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
LMPE (Mexico)	Long-term value: 0.5 mg/m ³

(Cont'd. on page 10)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 9)

como Sb

- **Exposure controls**

- **Engineering measures** Provide adequate ventilation.

- **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

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.

- **Engineering controls:**

Use only outdoors or in a well-ventilated area.

Provide adequate ventilation.

- **Breathing equipment:**



Respiratory protection required.

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 relevant information available.

- **Risk management measures**

See Section 7 for additional information.

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

(Cont'd. on page 11)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

No relevant information available.

(Cont'd. of page 10)

9 Physical and chemical properties

· Information on basic physical and chemical properties

- | | |
|---|---|
| · Appearance: | |
| Form: | Solid metal container containing liquid and solid contents. |
| Color: | According to product specification |
| · Odor: | Odorless |
| · Odor 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-ignition temperature: | Not determined. |
| · Decomposition temperature: | Not determined. |
| · Danger of explosion: | Heating may cause an explosion. |
| · Explosion limits | |
| Lower: | Not determined. |
| Upper: | Not determined. |
| · Vapor pressure: | Not applicable. |
| · Density: | Not determined. |
| · Relative density: | Not determined. |
| · Vapor 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. |
| · Other information | No relevant information available. |

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:**
- **Thermal decomposition / conditions to be avoided:**
 No decomposition if used and stored according to specifications.

(Cont'd. on page 12)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 11)

- **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 oxidizing agent on organic materials such as wood, paper and fats.
 Reacts with strong alkali.
- **Conditions to avoid** Sources of ignition, open flame, incompatible materials.
- **Incompatible materials** No relevant information available.
- **Hazardous decomposition products**
 Carbon monoxide and carbon dioxide
 Nitrogen oxides
 Sulfur oxides (SOx)

11 Toxicological information

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

- **LD/LC50 values that are 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/ lead styphnate

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.
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Sensitization:** May cause sensitisation by inhalation and skin contact.

- **IARC (International Agency for Research on Cancer):**

7631-86-9	Silicon dioxide	3
15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate	2B

- **NTP (National Toxicology Program):**

None of the ingredients are listed.

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

None of the ingredients are listed.

(Cont'd. on page 13)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 12)

- **Probable route(s) of exposure:**
 - Ingestion.
 - Inhalation.
 - Eye contact.
 - Skin contact.
- **Acute effects (acute toxicity, irritation and corrosivity):**
 - Danger of blast or crush-type injuries.
 - Inhalation may cause irritation to the respiratory system.
 - Harmful in contact with skin.
 - Toxic if swallowed or if inhaled.
 - Irritating to eyes, respiratory system and skin.
- **Repeated dose toxicity:** Repeated exposures may result in skin and/or respiratory sensitivity.
- **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.

12 Ecological information

- **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)

- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** May be accumulated in organism
- **Mobility in soil:** No 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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No relevant information available.

(Cont'd. on page 14)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 13)

13 Disposal considerations· **Waste treatment methods**· **Recommendation:**

Must not be disposed of 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 packagings**

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

14 Transport information· **UN-Number**

· DOT, ADR, IMDG, IATA

UN0301

· **UN proper shipping name**

· DOT

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

· ADR

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

· IMDG, IATA

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

· **Transport hazard class(es)**

· DOT

· **Class**

1.4

· **Label**

1.4G+6.1+8

· ADR, IMDG

· **Class**

1.4

· **Label**

1.4G+6.1+8

(Cont'd. on page 15)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 14)

· IATA



· Class 1.4G
 · Label 1.4G+6.1+8

· Packing group
 · DOT, ADR, IMDG, IATA II

· Environmental hazards
 · Marine pollutant: No

· Special precautions for user Not applicable.
 · EMS Number: F-A,S-Q

· Transport in bulk according to Annex II of
 MARPOL73/78 and the IBC Code Not applicable.

15 Regulatory information

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

· Section 302 (extremely hazardous substances):

None of the ingredients are listed.

· 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 powder - zinc dust (stabilised)

· 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
592-87-0	lead dithiocyanate

- Chemicals known to cause developmental toxicity for females:
Present in trace quantities.

(Cont'd. on page 16)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 15)

None of the ingredients are listed.

- **Chemicals known to cause developmental 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/ lead styphnate
------------	---

592-87-0	lead dithiocyanate
----------	--------------------

- **EPA (Environmental Protection Agency):**

7440-50-8	Copper	D
-----------	--------	---

7778-74-7	Potassium perchlorate	NL
-----------	-----------------------	----

7440-66-6	zinc powder - zinc dust (stabilised)	D, I, II
-----------	--------------------------------------	----------

10022-31-8	barium nitrate	D, CBD(inh), NL(oral)
------------	----------------	-----------------------

- **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
-----------	-------------------	---

- **Canadian Domestic Substances List (DSL) (Substances not listed.):**

All ingredients listed on DSL or NDSL.

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.

- **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

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulable, Toxic

vPvB: very Persistent and very Bioaccumulative

OSHA: Occupational Safety & Health Administration

Expl. 1.1: Explosives – Division 1.1

Expl. 1.4: Explosives – Division 1.4

Unst. Expl.: Explosives – Unstable explosive

Flam. Liq. 2: Flammable liquids – Category 2

Ox. Sol. 1: Oxidizing solids – Category 1

Ox. Sol. 2: Oxidizing solids – Category 2

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 1: Acute toxicity – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

(Cont'd. on page 17)

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: June 15, 2018

Revision: June 15, 2018

Trade name: Muzzle Blast 40 mm Round, CS
Muzzle Blast 40 mm Round, CS - 4 inch

(Cont'd. of page 16)

Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
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

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