

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous

Products Regulation (February 11, 2015).

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## **SECTION 1: IDENTIFICATION**

## 1.1. Product Identifier

**Product Form:** Mixture

Product Name: POCKET TACTICAL GRENADE, CS

**Product Code:** 1016 (1012301)

## 1.2. Intended Use of the Product

Crowd control device

## 1.3. Name, Address, and Telephone of the Responsible Party

## Company

Defense Technology, LLC 1855 South Loop Casper, WY 82601 USA

(307) 235-2136

www.defense-technology.com

customercare.wy@defense-technology.com

## 1.4. Emergency Telephone Number

Emergency Number : VelocityEHS

(800)255-3924 (North America) +1 (813)248-0585 (International)

## **SECTION 2: HAZARDS IDENTIFICATION**

## 2.1. Classification of the Substance or Mixture

## **GHS-US/CA Classification**

Flammable solids Category 1	H228
Pyrophoric solids Category 1	H250
Self-heating substances and mixtures Category 1	H251
Oxidizing solids Category 1	H271
Acute toxicity (oral) Category 4	H302
Acute toxicity (inhalation:dust,mist) Category 2	H330
Skin corrosion/irritation Category 2	H315
Serious eye damage/eye irritation Category 2	H319
Respiratory sensitization, Category 1	H334
Skin sensitization, Category 1	H317
Specific target organ toxicity — Single exposure, Category 3,	H335
Respiratory tract irritation	
Hazardous to the aquatic environment - Acute Hazard Category 2	H401
Hazardous to the aquatic environment - Chronic Hazard Category 3	H412

## 2.2. Label Elements

## **GHS-US/CA Labeling**

Hazard Pictograms (GHS-US/CA)









Signal Word (GHS-US/CA)

**Hazard Statements (GHS-US/CA)** 

: Danger

: H228 - Flammable solid.

H250 - Catches fire spontaneously if exposed to air.

H251 - Self-heating; may catch fire.

H271 - May cause fire or explosion; strong oxidizer.

H302 - Harmful if swallowed. H315 - Causes skin irritation.

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- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H334 May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H401 Toxic to aquatic life.
- H412 Harmful to aquatic life with long lasting effects.

- Precautionary Statements (GHS-US/CA): P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P220 Keep away from clothing and other combustible materials.
  - P222 Do not allow contact with air.
  - P231+P232 Handle under inert gas. Protect from moisture.
  - P235 Keep cool.
  - P240 Ground/bond container and receiving equipment.
  - P241 Use explosion-proof electrical, ventilating, and lighting equipment.
  - P260 Do not breathe vapors, mist, or spray.
  - P264 Wash hands, forearms, and other exposed areas thoroughly after handling.
  - 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 should not be allowed out of the workplace.
  - P273 Avoid release to the environment.
  - P280 Wear protective gloves, protective clothing, and eye protection.
  - P283 Wear fire/flame resistant/retardant clothing.
  - P284 Wear respiratory protection.
  - P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
  - P302+P352 IF ON SKIN: Wash with plenty of water.
  - P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for
  - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P306+P360 IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
  - P310 Immediately call a POISON CENTER or doctor.
  - P320 Specific treatment is urgent (see section 4 on this SDS).
  - P330 Rinse mouth.
  - 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 or doctor.
  - P362+P364 Take off contaminated clothing and wash it before reuse.
  - P370+P378 In case of fire: Use appropriate media (see section 5) to extinguish.
  - P371+P380+P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
  - P403- Store in a well-ventilated place.
  - P405 Store locked up.
  - P501 Dispose of contents/container in accordance with local, regional, national, and international regulations.

#### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Risk of explosion if heated under confinement.

## Unknown Acute Toxicity (GHS-US/CA)

No additional information available

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.1. **Substance**

Not applicable

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#### 3.2. Mixture

Name	Synonyms	Product Identifier	%	GHS Ingredient Classification
Potassium chlorate	potassium chlorate / POTASSIUM CHLORATE / Chloric acid, potassium salt (1:1) / Chloric acid, potassium salt / Berthollet's salt / Berthollet salt	(CAS-No.) 3811-04-9	10-30	Ox. Sol. 2, H272 Acute Tox. 4 (Oral), H302 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
o-Chloro- benzylidene malononitrile	[(2-Chlorophenyl)methylene]malononitrile / Malononitrile, o-chlorobenzylidene- / Propanedinitrile, [(2-chlorophenyl) methylene]- / (o-Chlorobenzylidene) malononitrile / 2-Chlorobenzylidenemalononitrile / Propanedinitrile, 2-[(2-chlorophenyl)methylene]- / CS / o-Chlorobenzalmalononitrile / ortho-Chlorobenzylidene malononitrile / ((2-Chlorophenyl)methylene)Propanedinitrile / 2-Chlorobenzalmalononitrile / ortho-Chlorobenzylidenemalononitrile / o-Chlorobenzylidene-malononitrile / o-Chlorobenzylidenemalononitrile	(CAS-No.) 2698-41-1	10-30	Acute Tox. 3 (Oral), H301 Acute Tox. 1 (Inhalation), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 Comb. Dust
Nitrocellulose	NITROCELLULOSE / COLLODION / Nitrocellulose, mixture, without pigment / Guncotton / Collodion / Cellulose, nitrate / Cellulose nitrate / Pyroxylin	(CAS-No.) 9004-70-0	10-30	Expl. 1.1, H201
Sucrose	.betaD-Fructofuranosyl .alphaD-glucopyranoside / D-(+)-Saccharose / Sacarose / sucrose / Sugar distillate / D-(+)-Sucrose / SUCROSE / Sugar / Saccharose / .alphaD-Glucopyranoside, .betaD-fructofuranosyl	(CAS-No.) 57-50-1	10-30	Comb. Dust
Magnesium carbonates	Magnesium carbonate / Carbonic acid, magnesium salt (1:?) / Carbonic acid, magnesium salt	(CAS-No.) 7757-69-9	10-30	Not classified
Copper	Copper, metallic / Pigment Metal 2 / Copper metal / CI 77400 / Copper, elemental / C.I. Pigment Metal 2 / C.I. 77400 / Granulated copper / copper	(CAS-No.) 7440-50-8	1-5	Aquatic Acute 1, H400 Aquatic Chronic 3, H412 Comb. Dust
Nitrocellulose	NITROCELLULOSE / COLLODION / Nitrocellulose, mixture, without pigment / Guncotton / Collodion / Cellulose, nitrate / Cellulose nitrate / Pyroxylin	(CAS-No.) 9004-70-0	1-5	Flam. Sol. 1, H228
Ethyl acetate	Acetic acid, ethyl ester / Ethyl ethanoate / ETHYL ACETATE	(CAS-No.) 141-78-6	1-5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Potassium nitrate	Nitric acid potassium salt / Nitric acid, potassium salt / Nitric acid potassium salt (1:1) / POTASSIUM NITRATE / potassium nitrate	(CAS-No.) 7757-79-1	1-5	Ox. Sol. 3, H272
Barium chromate	Baryta Yellow / C.I. Pigment Yellow 31 / Chromic acid (H2CrO4), barium salt (1:1) / Chromic acid, barium salt (1:1) / Lemon Yellow / Permanent Yellow / Pigment Yellow 31 / Ultramarine Yellow	(CAS-No.) 10294-40- 3	1-5	Resp. Sens. 1, H334 Skin Sens. 1A, H317 Carc. 1A, H350
Silicon	Silicon powder / Silicon powder, amorphous / SILICON / silicon	(CAS-No.) 7440-21-3	1-5	Comb. Dust
Zinc	C.I. Pigment Black 16 / C.I. Pigment Metal 6 / Zinc (metallic) / Pigment Black 16 / Zinc powder - zinc dust (stabilised) / Zinc powder - zinc dust (pyrophoric) / ZINC / zinc	(CAS-No.) 7440-66-6	0.1-1	Pyr. Sol. 1, H250 Water-react. 1, H260 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Comb. Dust
Zirconium	Zirconium, elemental / Zirconium metal / Zirconium powder (pyrophoric) / Zirconium suspended in a flammable liquid / Zirconium powder, dry / Zirconium metallic	(CAS-No.) 7440-67-7	0.1-1	Self-heat. 1, H251 Comb. Dust
Potassium perchlorate	Perchloric acid, potassium salt / Perchloric acid, potassium salt (1:1) / potassium perchlorate	(CAS-No.) 7778-74-7	0.1-1	Ox. Sol. 2, H272 Eye Irrit. 2A, H319 STOT SE 3, H335 Aquatic Acute 3, H402
Nickel	Nickel metal / Nickel, elemental / Nickel, metallic / Nickel, metal / C.I. 77775	(CAS-No.) 7440-02-0	0.1-1	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372

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				Aquatic Acute 1, H400 Aquatic Chronic 3, H412 Comb. Dust
Magnesium stearate	Bis(octadecanoic acid)magnesium salt / Salt of stearic acid with magnesium base / Magnesium octadecanoate / Salts of stearic acids with magnesium bases / magnesium stearate / Magnesium salts of stearic acid / MAGNESIUM STEARATE / Magnesium distearate / Octadecanoic acid, magnesium salt (2:1) / Stearic acid, magnesium salt / Stearate, magnesium / Octadecanoic acid, magnesium salt / Dioctadecanoate magnesium	(CAS-No.) 557-04-0	0.1-1	Comb. Dust
Charcoal	Charcoal (An amorphous form of carbon produced by partially burning or oxidizing wood or other organic matter.)	(CAS-No.) 16291-96- 6	0.1-1	Self-heat. 2, H252 Comb. Dust
Titanium	Titanium powder, dry / Titanium powder / Titanium powder, wetted / Titanium sponge powders / titanium	(CAS-No.) 7440-32-6	<0.1	Comb. Dust
Potassium perchlorate	Perchloric acid, potassium salt / Perchloric acid, potassium salt (1:1) / potassium perchlorate	(CAS-No.) 7778-74-7	<0.1	Ox. Sol. 1, H271 Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 STOT SE 3, H335 STOT RE 2, H373
Manganese	Manganese, elemental / Manganese metal / manganese	(CAS-No.) 7439-96-5	<0.1	Flam. Sol. 2, H228 STOT RE 1, H372 Aquatic Acute 2, H401 Aquatic Chronic 2, H411 Comb. Dust
Chromic acid (H2CrO4), lead(2+) salt (1:1)	Lead chromate / C.I. Pigment Yellow 34 / Chrome Yellow / Chromic acid (H2CrO4), lead(2+) salt / Chromic acid, lead(2+) salt (1:1) / Lead chromate (PbCrO4) / Lead chromate(VI) / Lead(II) chromate / Lead(2+) chromate / C.I. 77600 / Lead(II) tetraoxidochromate / lead chromate	(CAS-No.) 7758-97-6	<0.1	Carc. 1A, H350 STOT RE 2, H373 Skin Sens. 1B, H317
Methanol	METHYL ALCOHOL / Wood alcohol / Methyl hydroxide / Carbinol / Methyl alcohol	(CAS-No.) 67-56-1	<0.1	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapor), H331 STOT SE 1, H370

Full text of H-statements: see section 16

## **SECTION 4: FIRST AID MEASURES**

## 4.1. Description of First-aid Measures

**General:** First aid personnel should wear appropriate protective equipment during any rescue. Rescuers must don respiratory protection before approaching exposed persons. . Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Immediately call a poison center or doctor/physician.

**Skin Contact:** Immediately remove contaminated clothing. Wash affected area with soap and water for at least 15 minutes. Obtain medical attention if irritation/rash develops or persists.

**Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

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<sup>\*</sup>Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

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## 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**General:** Energetic effects (blast effects, heat, noise, and shrapnel) from functioning of the product can cause serious physical injuries. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Skin sensitization. Causes skin irritation. Causes serious eye irritation. Harmful if swallowed. Fatal if inhaled.

**Inhalation:** Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death. Exposure may produce cough, mucous secretions, shortness of breath, chest tightness or other symptoms indicative of an allergic/sensitization reaction. Irritation of the respiratory tract and the other mucous membranes.

Skin Contact: May cause an allergic skin reaction. Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts.

Chronic Symptoms: May cause sensitization by inhalation and skin contact.

## 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

## **SECTION 5: FIRE-FIGHTING MEASURES**

## 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>). Water spray, fog, carbon dioxide (CO<sub>2</sub>), alcohol-resistant foam, dry chemical, or sand.

Unsuitable Extinguishing Media: None known.

## 5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: May cause fire or explosion; strong oxidizer. Flammable solid. Risk of explosion if heated under confinement.

**Explosion Hazard:** Risk of explosion if heated under confinement. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

**Reactivity:** Oxidizer: increases the burning rate of combustible materials.

## 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

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

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Metallic oxides. Oxides and compounds of carbon, nitrogen, sulfur, and chlorine.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

## 5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

## 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Wear appropriate personal protective equipment. Do not breathe dust generated during deployment. Keep away from heat, sparks, open flames, hot surfaces. – No smoking. Do not get in eyes, on skin, or on clothing. Evacuate danger area. Do not breathe dust. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use only non-sparking tools. Keep away from combustible material.

### 6.1.1. For Non-Emergency Personnel

**Protective Equipment:** Wear protective clothing and respiratory protection if dust or fumes are present. Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Evacuate danger area. Stop leak if safe to do so.

## **6.1.2.** For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection. Wear protective clothing and respiratory protection if dust or fumes are present.

**Emergency Procedures:** Eliminate ignition sources. Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

## 6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

### 6.3. Methods and Materials for Containment and Cleaning Up

**For Containment:** Absorb and contain with inert material. Place contents in suitable container for disposal. Use only non-sparking tools. Avoid shock and friction.

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**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Mechanically recover the product. Use only non-sparking tools. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

## 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

## **SECTION 7: HANDLING AND STORAGE**

## 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** May cause or intensify fire; oxidizer. CS Agent released during deployment is toxic by inhalation and a severe irritant to skin, eyes, and respiratory system. Avoid shock and friction.

**Precautions for Safe Handling:** Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Keep away from sources of ignition - No smoking. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area. Do not breathe dust. Keep away from heat, sparks, open flames, and hot surfaces. No smoking. Keep away from heat, sparks, open flames, hot surfaces, combustible materials, incompatible materials. - No smoking.

**Hygiene Measures:** This product is an explosive and should only be used under the supervision of trained and licensed personnel. Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

## 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store locked up/in a secure area. Store in accordance with local regulations on explosives. Store under moderate temperatures recommended by competent authority. Store under dry conditions in a well ventilated magazine that has been approved for either detonator storage or explosive storage. Do NOT store explosives in a detonator magazine or detonators in an explosive magazine. Keep away from heat, spark and flames. Keep containers closed. Explosives should be kept well away from initiating explosives; protected from physical damage; separated from oxidizing materials, combustibles, and sources of heat. Isolate from incompatibles. . Keep/Store away from extremely high or low temperatures, direct sunlight, ignition sources, combustible materials, incompatible materials. Keep in fireproof place. Store in a well-ventilated place. Keep container tightly closed.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers.

Special Rules on Packaging: Keep only in the original container.

## 7.3. Specific End Use(s)

Crowd control device

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Charcoal (16291-96-6)		
Ontario	OEL TWA	10 mg/m³ (except activated)
Silicon (7440-21-3)		
USA OSHA	OSHA PEL (TWA) [1]	15 mg/m³ (total dust)
		5 mg/m³ (respirable fraction)
USA NIOSH	NIOSH REL (TWA)	10 mg/m³ (total dust)
		5 mg/m³ (respirable dust)
British Columbia	OEL TWA	10 mg/m³ (total dust)
		3 mg/m³ (respirable fraction)
New Brunswick	OEL TWA	10 mg/m <sup>3</sup>
Nunavut	OEL STEL	20 mg/m <sup>3</sup>
Nunavut	OEL TWA	10 mg/m <sup>3</sup>
Northwest Territories	OEL STEL	20 mg/m <sup>3</sup>
Northwest Territories	OEL TWA	10 mg/m <sup>3</sup>
Québec	VEMP (OEL TWA)	10 mg/m³ (containing no Asbestos and <1% Crystalline
		silica-total dust)
Saskatchewan	OEL STEL	20 mg/m <sup>3</sup>

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	1	10 mg/m <sup>3</sup>
Saskatchewan	OEL TWA	10 mg/m <sup>3</sup>
Yukon	OEL STEL	20 mg/m³
Yukon	OEL TWA	30 mppcf
		10 mg/m <sup>3</sup>
o-Chlorobenzylidene malon		
USA ACGIH	ACGIH OEL Ceiling [ppm]	0.05 ppm (inhalable fraction and vapor)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen, Skin - potential
		significant contribution to overall exposure by the
		cutaneous route
USA OSHA	OSHA PEL (TWA) [1]	0.4 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) [2]	0.05 ppm
USA NIOSH	NIOSH REL (Ceiling)	0.4 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL C [ppm]	0.05 ppm
USA IDLH	IDLH	2 mg/m³
Alberta	OEL C	0.4 mg/m³
Alberta	OEL Ceiling [ppm]	0.05 ppm
British Columbia	OEL Ceiling [ppm]	0.05 ppm
Manitoba	OEL Ceiling [ppm]	0.05 ppm (inhalable fraction and vapor)
New Brunswick	OEL C	0.39 mg/m³
New Brunswick	OEL Ceiling [ppm]	0.05 ppm
Newfoundland & Labrador	OEL Ceiling [ppm]	0.05 ppm (inhalable fraction and vapor)
Nova Scotia	OEL Ceiling [ppm]	0.05 ppm (inhalable fraction and vapor)
Nunavut	OEL Ceiling [ppm]	0.05 ppm
Northwest Territories	OEL Ceiling [ppm]	0.05 ppm
Ontario	OEL Ceiling [ppm]	0.05 ppm
Prince Edward Island	OEL Ceiling [ppm]	0.05 ppm (inhalable fraction and vapor)
Québec	Plafond (OEL Ceiling) [ppm]	0.05 ppm
Saskatchewan	OEL Ceiling [ppm]	0.05 ppm
Yukon	OEL STEL	0.4 mg/m <sup>3</sup>
Yukon	OEL STEL [ppm]	0.05 ppm
Yukon	OEL TWA	0.4 mg/m <sup>3</sup>
Yukon	OEL TWA [ppm]	0.05 ppm
Sucrose (57-50-1)		
USA ACGIH	ACGIH OEL TWA	10 mg/m³
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA OSHA	OSHA PEL (TWA) [1]	15 mg/m³ (total dust)
		5 mg/m³ (respirable fraction)
USA NIOSH	NIOSH REL (TWA)	10 mg/m³ (total dust)
		5 mg/m³ (respirable dust)
Alberta	OEL TWA	10 mg/m <sup>3</sup>
British Columbia	OEL TWA	10 mg/m³ (total dust)
		3 mg/m³ (respirable fraction)
Manitoba	OEL TWA	10 mg/m <sup>3</sup>
New Brunswick	OEL TWA	10 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA	10 mg/m <sup>3</sup>
Nova Scotia	OEL TWA	10 mg/m <sup>3</sup>
Nunavut	OEL STEL	20 mg/m <sup>3</sup>
Nunavut	OEL TWA	10 mg/m³
Northwest Territories	OEL STEL	20 mg/m <sup>3</sup>
Northwest Territories	OEL TWA	10 mg/m³
Ontario	OEL TWA	10 mg/m³
Prince Edward Island	OEL TWA	10 mg/m³
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Outhor	VENAD (OEL TIAVA)	10 / 3
Québec	VEMP (OEL TWA)	10 mg/m³
Saskatchewan	OEL STEL	20 mg/m³
Saskatchewan	OEL TWA	10 mg/m³
Yukon	OEL STEL	20 mg/m <sup>3</sup>
Yukon	OEL TWA	30 mppcf
		10 mg/m <sup>3</sup>
Magnesium stearate (557-0		
USA ACGIH	ACGIH OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter (Stearates)
		3 mg/m³ (respirable particulate matter (Stearates)
British Columbia	OEL TWA	10 mg/m³ (does not include Stearates of toxic metals-
		inhalable (Stearates)
		3 mg/m³ (does not include Stearates of toxic metals-
		respirable (Stearates)
Manitoba	OEL TWA	10 mg/m³ (inhalable particulate matter (Stearates)
		3 mg/m³ (respirable particulate matter (Stearates)
Newfoundland & Labrador	OEL TWA	10 mg/m³ (inhalable particulate matter (Stearates)
		3 mg/m³ (respirable particulate matter (Stearates)
Nova Scotia	OEL TWA	10 mg/m³ (inhalable particulate matter (Stearates)
		3 mg/m³ (respirable particulate matter (Stearates)
Ontario	OEL TWA	10 mg/m³ (except stearates of toxic metals-inhalable
		particulate matter)
		3 mg/m³ (except stearates of toxic metals-respirable
5: 5! !!!	OF TAKE	particulate matter)
Prince Edward Island	OEL TWA	10 mg/m³ (inhalable particulate matter (Stearates)
0 (1	V545 (05) TMA	3 mg/m³ (respirable particulate matter (Stearates)
Québec	VEMP (OEL TWA)	10 mg/m³ (Stearates)
Manganese (7439-96-5)	T	
USA ACGIH	ACGIH OEL TWA	0.02 mg/m³ (respirable particulate matter)
		0.1 mg/m³ (inhalable particulate matter)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA OSHA	OSHA PEL (Ceiling)	Not Classifiable as a Human Carcinogen 5 mg/m³ (fume)
USA OSHA USA NIOSH	OSHA PEL (Ceiling) NIOSH REL (TWA)	Not Classifiable as a Human Carcinogen 5 mg/m³ (fume) 1 mg/m³ (fume)
USA OSHA USA NIOSH USA NIOSH	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL)	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³
USA OSHA USA NIOSH USA NIOSH USA IDLH	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH	Not Classifiable as a Human Carcinogen 5 mg/m³ (fume) 1 mg/m³ (fume) 3 mg/m³ 500 mg/m³
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³
USA OSHA USA NIOSH USA NIOSH USA IDLH	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (respirable particulate matter)
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia Manitoba New Brunswick	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA OEL TWA OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (inhalable particulate matter)  0.1 mg/m³  0.2 mg/m³  0.1 mg/m³  0.2 mg/m³  0.2 mg/m³
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia  Manitoba  New Brunswick Newfoundland & Labrador	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA OEL TWA OEL TWA OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia Manitoba New Brunswick	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA OEL TWA OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³ (respirable particulate matter)  0.2 mg/m³ (inhalable particulate matter)  0.2 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (respirable particulate matter)  0.2 mg/m³ (respirable particulate matter)
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia  Manitoba  New Brunswick Newfoundland & Labrador  Nova Scotia	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³  0.02 mg/m³  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia  Manitoba  New Brunswick Newfoundland & Labrador  Nova Scotia  Nunavut	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³  0.02 mg/m³  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia  Manitoba  New Brunswick Newfoundland & Labrador  Nova Scotia  Nunavut Nunavut	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³  0.2 mg/m³
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia  Manitoba  New Brunswick Newfoundland & Labrador  Nova Scotia  Nunavut Nunavut Northwest Territories	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.0 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.6 mg/m³  0.2 mg/m³  0.6 mg/m³
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia  Manitoba  New Brunswick Newfoundland & Labrador  Nova Scotia  Nunavut Nunavut Northwest Territories Northwest Territories	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³  0.2 mg/m³  0.2 mg/m³  0.2 mg/m³
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia  Manitoba  New Brunswick Newfoundland & Labrador  Nova Scotia  Nunavut Nunavut Northwest Territories Ontario	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA OEL STEL OEL TWA OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia  Manitoba  New Brunswick Newfoundland & Labrador  Nova Scotia  Nunavut Nunavut Northwest Territories Northwest Territories	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³  0.2 mg/m³
USA OSHA USA NIOSH USA NIOSH USA IDLH Alberta British Columbia  Manitoba  New Brunswick Newfoundland & Labrador  Nova Scotia  Nunavut Nunavut Northwest Territories Ontario	OSHA PEL (Ceiling) NIOSH REL (TWA) NIOSH REL (STEL) IDLH OEL TWA OEL STEL OEL TWA OEL TWA	Not Classifiable as a Human Carcinogen  5 mg/m³ (fume)  1 mg/m³ (fume)  3 mg/m³  500 mg/m³  0.2 mg/m³  0.2 mg/m³ (total)  0.02 mg/m³ (respirable)  0.02 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³  0.02 mg/m³ (respirable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.1 mg/m³ (inhalable particulate matter)  0.2 mg/m³

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Saskatchewan		O 6 mg/m <sup>3</sup>
	OEL TWA	0.6 mg/m³
Saskatchewan	OEL TWA	0.2 mg/m³
Yukon	OEL C	5 mg/m <sup>3</sup>
Chromic acid (H2CrO4), lead		1
USA ACGIH	ACGIH OEL TWA	0.0002 mg/m³ (inhalable particulate matter)
USA ACGIH	ACGIH OEL STEL	0.0005 mg/m³ (inhalable particulate matter)
USA ACGIH	ACGIH chemical category	Confirmed Human Carcinogen, dermal sensitizer
Alberta	OEL TWA	0.05 mg/m <sup>3</sup>
		0.012 mg/m³
British Columbia	OEL TWA	0.012 mg/m³ (total)
		0.05 mg/m³ (total)
Manitoba	OEL STEL	0.0005 mg/m³ (inhalable particulate matter)
Manitoba	OEL TWA	0.0002 mg/m³ (inhalable particulate matter)
New Brunswick	OEL TWA	0.012 mg/m³
		0.05 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL STEL	0.0005 mg/m³ (inhalable particulate matter)
Newfoundland & Labrador	OEL TWA	0.0002 mg/m³ (inhalable particulate matter)
Nova Scotia	OEL STEL	0.0005 mg/m³ (inhalable particulate matter)
Nova Scotia	OEL TWA	0.0002 mg/m³ (inhalable particulate matter)
Nunavut	OEL STEL	0.15 mg/m <sup>3</sup>
		0.036 mg/m <sup>3</sup>
Nunavut	OEL TWA	0.05 mg/m <sup>3</sup>
		0.012 mg/m <sup>3</sup>
Northwest Territories	OEL STEL	0.15 mg/m <sup>3</sup>
		0.036 mg/m <sup>3</sup>
Northwest Territories	OEL TWA	0.05 mg/m <sup>3</sup>
		0.012 mg/m <sup>3</sup>
Ontario	OEL TWA	0.05 mg/m³ (designated substances regulation)
		0.012 mg/m³ (designated substances regulation)
		0.012 mg/m³ (applies to workplaces to which the
		designated substances regulation does not apply)
		0.05 mg/m³ (applies to workplaces to which the designated
		substances regulation does not apply)
Prince Edward Island	OEL STEL	0.0005 mg/m³ (inhalable particulate matter)
Prince Edward Island	OEL TWA	0.0002 mg/m³ (inhalable particulate matter)
Québec	VEMP (OEL TWA)	0.012 mg/m³
Saskatchewan	OEL STEL	0.036 mg/m <sup>3</sup>
		0.15 mg/m <sup>3</sup>
Saskatchewan	OEL TWA	0.012 mg/m³
		0.05 mg/m <sup>3</sup>
Yukon	OEL TWA	0.05 mg/m <sup>3</sup>
Zirconium (7440-67-7)		
USA ACGIH	ACGIH OEL TWA	5 mg/m³
USA ACGIH	ACGIH OEL STEL	10 mg/m <sup>3</sup>
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL (TWA)	5 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (STEL)	10 mg/m <sup>3</sup>
USA IDLH	IDLH	50 mg/m³
Alberta	OEL STEL	10 mg/m³
Alberta	OEL TWA	5 mg/m³
British Columbia	OEL STEL	10 mg/m³
British Columbia	OEL TWA	5 mg/m³
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	1	cording To The Hazardous Products Regulation (February 11, 2015).
Manitoba	OEL STEL	10 mg/m <sup>3</sup>
Manitoba	OEL TWA	5 mg/m <sup>3</sup>
New Brunswick	OEL STEL	10 mg/m³
New Brunswick	OEL TWA	5 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL STEL	10 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA	5 mg/m³
Nova Scotia	OEL STEL	10 mg/m <sup>3</sup>
Nova Scotia	OEL TWA	5 mg/m <sup>3</sup>
Nunavut	OEL STEL	10 mg/m <sup>3</sup>
Nunavut	OEL TWA	5 mg/m <sup>3</sup>
Northwest Territories	OEL STEL	10 mg/m <sup>3</sup>
Northwest Territories	OEL TWA	5 mg/m³
Ontario	OEL STEL	10 mg/m <sup>3</sup>
Ontario	OEL TWA	5 mg/m <sup>3</sup>
Prince Edward Island	OEL STEL	10 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA	5 mg/m³
Québec	VECD (OEL STEL)	10 mg/m³
Québec	VEMP (OEL TWA)	5 mg/m <sup>3</sup>
Saskatchewan	OEL STEL	10 mg/m <sup>3</sup>
Saskatchewan	OEL TWA	5 mg/m <sup>3</sup>
Copper (7440-50-8)		
USA ACGIH	ACGIH OEL TWA	0.2 mg/m³ (fume)
USA OSHA	OSHA PEL (TWA) [1]	0.1 mg/m³ (fume)
	, ,,,,,	1 mg/m³ (dust and mist)
USA NIOSH	NIOSH REL (TWA)	1 mg/m³ (dust and mist)
		0.1 mg/m³ (fume)
USA IDLH	IDLH	100 mg/m³ (dust, fume and mist)
Alberta	OEL TWA	0.2 mg/m³ (fume)
		1 mg/m³ (dust and mist)
British Columbia	OEL TWA	1 mg/m³ (dust and mist)
		0.2 mg/m³ (fume)
Manitoba	OEL TWA	0.2 mg/m³ (fume)
New Brunswick	OEL TWA	0.2 mg/m³ (fume)
		1 mg/m³ (dust and mist)
Newfoundland & Labrador	OEL TWA	0.2 mg/m³ (fume)
Nova Scotia	OEL TWA	0.2 mg/m³ (fume)
Nunavut	OEL STEL	3 mg/m³ (dust and mist)
		0.6 mg/m³ (fume)
Nunavut	OEL TWA	0.2 mg/m³ (fume)
		1 mg/m³ (dust and mist)
Northwest Territories	OEL STEL	3 mg/m³ (dust and mist)
		0.6 mg/m³ (fume)
Northwest Territories	OEL TWA	0.2 mg/m³ (fume)
		1 mg/m³ (dust and mist)
Ontario	OEL TWA	0.2 mg/m³ (fume)
		1 mg/m³ (dust and mist)
Prince Edward Island	OEL TWA	0.2 mg/m³ (fume)
Québec	VEMP (OEL TWA)	0.2 mg/m³ (fume)
		1 mg/m³ (dust and mist)
Saskatchewan	OEL STEL	0.6 mg/m³ (fume)
		3 mg/m³ (dust and mist)

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Saskatchewan	OEL TWA	0.2 mg/m³ (fume)
		1 mg/m³ (dust and mist)
Yukon	OEL STEL	0.2 mg/m³ (fume)
		2 mg/m³ (dust and mist)
Yukon	OEL TWA	0.2 mg/m³ (fume)
		1 mg/m³ (dust and mist)
Methanol (67-56-1)		
USA ACGIH	ACGIH OEL TWA [ppm]	200 ppm
USA ACGIH	ACGIH OEL STEL [ppm]	250 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure
	25. (21.1)	by the cutaneous route
USA ACGIH	BEI (BLV)	15 mg/l Parameter: Methanol - Medium: urine - Sampling
	05114 051 (7114) [4]	time: end of shift (background, nonspecific)
USA OSHA	OSHA PEL (TWA) [1]	260 mg/m³
USA OSHA	OSHA PEL (TWA) [2]	200 ppm
USA NIOSH	NIOSH REL (TWA)	260 mg/m³
USA NIOSH	NIOSH REL TWA [ppm]	200 ppm
USA NIOSH	NIOSH REL (STEL)	325 mg/m³
USA NIOSH	NIOSH REL STEL [ppm]	250 ppm
USA IDLH	IDLH [ppm]	6000 ppm
Alberta	OEL STEL	328 mg/m³
Alberta	OEL STEL [ppm]	250 ppm
Alberta	OEL TWA	262 mg/m³
Alberta	OEL TWA [ppm]	200 ppm
British Columbia	OEL STEL [ppm]	250 ppm
British Columbia	OEL TWA [ppm]	200 ppm
Manitoba	OEL STEL [ppm]	250 ppm
Manitoba	OEL TWA [ppm]	200 ppm
New Brunswick	OEL STEL	328 mg/m³
New Brunswick	OEL STEL [ppm]	250 ppm
New Brunswick	OEL TWA	262 mg/m³
New Brunswick	OEL TWA [ppm]	200 ppm
Newfoundland & Labrador Newfoundland & Labrador	OEL TWA [ppm]	250 ppm
	OEL TWA [ppm] OEL STEL [ppm]	200 ppm
Nova Scotia Nova Scotia	OEL TWA [ppm]	250 ppm 200 ppm
Nunavut	OEL TWA [ppm] OEL STEL [ppm]	250 ppm
Nunavut	OEL TWA [ppm]	200 ppm
Northwest Territories	OEL TWA [ppm]	250 ppm
Northwest Territories	OEL TWA [ppm]	200 ppm
Ontario	OEL STEL [ppm]	250 ppm
Ontario	OEL TWA [ppm]	200 ppm
Prince Edward Island	OEL TWA [ppm]	250 ppm
Prince Edward Island	OEL TWA [ppm]	200 ppm
Québec Québec	VECD (OEL STEL) [nnm]	328 mg/m³ 250 ppm
	VECD (OEL STEL) [ppm]	262 mg/m <sup>3</sup>
Québec	VEMP (OEL TWA)	
Québec	VEMP (OEL TWA) [ppm]	200 ppm
Saskatchewan	OEL STEL [ppm]	250 ppm
Saskatchewan	OEL TWA [ppm]	200 ppm
Yukon	OEL STEL	310 mg/m³
Yukon	OEL STEL [ppm]	250 ppm

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Yukon	OEL TWA	260 mg/m³
Yukon	OEL TWA [ppm]	200 ppm
Nickel (7440-02-0)		
USA ACGIH	ACGIH OEL TWA	1.5 mg/m³ (inhalable particulate matter)
USA ACGIH	ACGIH chemical category	Not Suspected as a Human Carcinogen
USA ACGIH	BEI (BLV)	5 μg/l Parameter: Nickel - Medium: urine - Sampling time:
		post-shift at end of workweek (background)
USA OSHA	OSHA PEL (TWA) [1]	1 mg/m³
USA NIOSH	NIOSH REL (TWA)	0.015 mg/m³
USA IDLH	IDLH	10 mg/m <sup>3</sup>
Alberta	OEL TWA	1.5 mg/m³
British Columbia	OEL TWA	0.05 mg/m <sup>3</sup>
Manitoba	OEL TWA	1.5 mg/m³ (inhalable particulate matter)
New Brunswick	OEL TWA	1 mg/m³
Newfoundland & Labrador	OEL TWA	1.5 mg/m³ (inhalable particulate matter)
Nova Scotia	OEL TWA	1.5 mg/m³ (inhalable particulate matter)
Nunavut	OEL STEL	3 mg/m³ (inhalable fraction)
Nunavut	OEL TWA	1.5 mg/m³ (inhalable fraction)
Northwest Territories	OEL STEL	3 mg/m³ (inhalable fraction)
Northwest Territories	OEL TWA	1.5 mg/m³ (inhalable fraction)
Ontario	OEL TWA	1 mg/m³ (inhalable fraction)
Prince Edward Island	OEL TWA	1.5 mg/m³ (inhalable particulate matter)
Québec	VEMP (OEL TWA)	1.5 mg/m³ (inhalable dust)
Saskatchewan	OEL STEL	3 mg/m³ (inhalable fraction)
Saskatchewan	OEL TWA	1.5 mg/m³ (inhalable fraction)
Yukon	OEL STEL	3 mg/m³
Yukon	OEL TWA	1 mg/m³
Zirconium (7440-67-7)		
USA ACGIH	ACGIH OEL TWA	5 mg/m <sup>3</sup>
USA ACGIH	ACGIH OEL STEL	10 mg/m <sup>3</sup>
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL (TWA)	5 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (STEL)	10 mg/m <sup>3</sup>
USA IDLH	IDLH	50 mg/m <sup>3</sup>
Alberta	OEL STEL	10 mg/m <sup>3</sup>
Alberta	OEL TWA	5 mg/m <sup>3</sup>
British Columbia	OEL STEL	10 mg/m <sup>3</sup>
British Columbia	OEL TWA	5 mg/m <sup>3</sup>
Manitoba	OEL STEL	10 mg/m <sup>3</sup>
Manitoba	OEL TWA	5 mg/m³
New Brunswick	OEL STEL	10 mg/m³
New Brunswick	OEL TWA	5 mg/m³
Newfoundland & Labrador	OEL STEL	10 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA	5 mg/m <sup>3</sup>
Nova Scotia	OEL STEL	10 mg/m <sup>3</sup>
Nova Scotia	OEL TWA	5 mg/m <sup>3</sup>
Nunavut	OEL STEL	10 mg/m³
Nunavut	OEL TWA	5 mg/m <sup>3</sup>
Northwest Territories	OEL STEL	10 mg/m³
Northwest Territories	OEL TWA	5 mg/m <sup>3</sup>
Ontario	OEL STEL	10 mg/m <sup>3</sup>

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Ontario	OEL TWA	5 mg/m <sup>3</sup>
Prince Edward Island	OEL STEL	10 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA	5 mg/m <sup>3</sup>
Québec	VECD (OEL STEL)	10 mg/m <sup>3</sup>
Québec	VEMP (OEL TWA)	5 mg/m <sup>3</sup>
Saskatchewan	OEL STEL	10 mg/m <sup>3</sup>
Saskatchewan	OEL TWA	5 mg/m <sup>3</sup>

#### 8.2. **Exposure Controls**

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Proper grounding procedures to avoid static electricity should be followed. Product to be handled in a closed system and under strictly controlled conditions. Use explosion-proof equipment. Gas detectors should be used when toxic gases may be released. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles or glasses. Insufficient ventilation: wear respiratory protection. Protective goggles.











Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection: During deployment: . Wear protective gloves.

Eye and Face Protection: During deployment: . Chemical safety goggles or safety glasses with side shields.

Skin and Body Protection: During deployment: . Wear suitable protective clothing.

Respiratory Protection: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Thermal Hazard Protection: If material is hot, wear thermally resistant protective gloves.

Other Information: When using, do not eat, drink or smoke.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1. Information on Basic Physical and Chemical Pr	Properties
--	------------

**Physical State** Solid

**Appearance** Solid metal container containing liquid and solid contents. Colour according

to product specification.

Odor Odourless pre-depoyment. Pungent/Stinging odour during/after

deployment.

**Odor Threshold** No data available

No data available

No data available **Evaporation Rate Melting Point** No data available

**Freezing Point** No data available **Boiling Point** No data available

**Flash Point** No data available **Auto-ignition Temperature** No data available

**Decomposition Temperature** Flammability (solid, gas) Flammable solid **Lower Flammable Limit** No data available

**Vapor Pressure** No data available Relative Vapor Density at 20°C No data available

**Upper Flammable Limit** 

**Relative Density** No data available **Specific Gravity** No data available

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No data available

No data available

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Solubility: partly soluble.Partition Coefficient: N-Octanol/Water: No data availableViscosity: No data available

Oxidizing Properties: May cause fire or explosion; strong oxidizer.Explosive Properties: Risk of explosion if heated under confinement

## **SECTION 10: STABILITY AND REACTIVITY**

### 10.1. Reactivity:

Oxidizer: increases the burning rate of combustible materials.

### 10.2. Chemical Stability:

May cause fire or explosion; strong oxidizer. Risk of explosion if heated under confinement. Flammable solid.

### 10.3. Possibility of Hazardous Reactions:

In contact with water releases flammable gas.

### 10.4. Conditions to Avoid:

Keep away from open flames, hot surfaces and sources of ignition. Incompatible materials.

## 10.5. Incompatible Materials:

Strong acids, strong bases, strong oxidizers.

### 10.6. Hazardous Decomposition Products:

Thermal decomposition may produce: Metallic oxides. Oxides and compounds of carbon, nitrogen, sulfur, and chlorine.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

## 11.1. Information on Toxicological Effects - Product

Likely routes of exposure: Dermal. Inhalation. Eye contact.

Acute Toxicity (Oral): Harmful if swallowed.
Acute Toxicity (Dermal): Not classified
Acute Toxicity (Inhalation): Fatal if inhaled.

LD50 and LC50 Data:

POCKET TACTICAL GRENADE, CS	
ATE US/CA (oral)	815.60 mg/kg body weight

Skin Corrosion/Irritation: Causes skin irritation.

Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic

skin reaction.

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified.

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

**Specific Target Organ Toxicity (Single Exposure):** May cause respiratory irritation.

Aspiration Hazard: Not classified

**Symptoms/Injuries After Inhalation:** Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death. Exposure may produce cough, mucous secretions, shortness of breath, chest tightness or other symptoms indicative of an allergic/sensitization reaction. Irritation of the respiratory tract and the other mucous membranes. **Symptoms/Injuries After Skin Contact:** May cause an allergic skin reaction. Redness, pain, swelling, itching, burning, dryness, and

**Symptoms/Injuries After Skin Contact:** May cause an allergic skin reaction. Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

**Symptoms/Injuries After Ingestion:** This material is harmful orally and can cause adverse health effects or death in significant amounts.

**Chronic Symptoms:** May cause sensitization by inhalation and skin contact.

**Other information**: Health effects are are due to either exposure to products generated during deployment or to energetic physical effects.

## 11.2. Information on Toxicological Effects - Ingredient(s)

## LD50 and LC50 Data:

Charcoal (16291-96-6)	
LC50 Inhalation Rat	> 4.97 mg/l/4h

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Silicon (7440-21-3)	
LD50 Oral Rat	3160 mg/kg
	3100 mg/ kg
Potassium nitrate (7757-79-1) LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
LC50 Inhalation Rat	> 5000 mg/kg > 0.527 mg/l/4h (No deaths)
	> 0.527 mg/1/4m (NO deaths)
o-Chlorobenzylidene malononitrile (2698-41-1)	470 //
LD50 Oral Rat	178 mg/kg
ATE US/CA (gas)	10.00 ppmV/4h
ATE US/CA (vapors)	0.05 mg/l/4h
ATE US/CA (dust, mist)	0.01 mg/l/4h
Sucrose (57-50-1)	1
LD50 Oral Rat	29700 mg/kg
Nitrocellulose (9004-70-0)	
LD50 Oral Rat	5000 mg/kg
Potassium chlorate (3811-04-9)	
LD50 Oral Rat	1870 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
LC50 Inhalation Rat	> 5.1 mg/l/4h
Magnesium stearate (557-04-0)	
LD50 Oral Rat	> 2000 mg/kg
Nitrocellulose (9004-70-0)	
LD50 Oral Rat	5000 mg/kg
Manganese (7439-96-5)	
LD50 Oral Rat	> 2000 mg/kg
LC50 Inhalation Rat	> 5.14 mg/l/4h
LC50 Inhalation Rat	> 5.14 mg/l/4h
Barium nitrate (10022-31-8)	
LD50 Oral Rat	50 – 300 mg/kg
LC50 Inhalation Rat	> 1.1 mg/l/4h (Species: Wistar)
ATE US/CA (oral)	50.00 mg/kg body weight
ATE US/CA (dust, mist)	1.50 mg/l/4h
Methanol (67-56-1)	
LD50 Dermal Rabbit	15840 mg/kg
LC50 Inhalation Rat	22500 ppm (Exposure time: 8 h)
ATE US/CA (oral)	100.00 mg/kg body weight
ATE US/CA (dermal)	300.00 mg/kg body weight
ATE US/CA (vapors)	3.00 mg/l/4h
Potassium perchlorate (7778-74-7)	
ATE US/CA (oral)	500.00 mg/kg body weight
Nickel (7440-02-0)	
LD50 Oral Rat	> 9000 mg/kg
LC50 Inhalation Rat	> 10.2 mg/l (Exposure time: 1 h)
Barium chromate (10294-40-3)	, <u> </u>
IARC Group	1
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Chromic acid (H2CrO4), lead(2+) salt (1:1) (7758-97-6)	
IARC Group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens, Reasonably anticipated to be Human
Tradicinal Toxicology Frogram (1917) Status	Carcinogen.
	caromogeni

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OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Nickel (7440-02-0)	
IARC Group	2B
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

## **SECTION 12: ECOLOGICAL INFORMATION**

## 12.1. Toxicity

**Ecology - General:** Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

Potassium nitrate (7757-79-1)	
EC50 - Crustacea [1]	490 mg/l
Nitrocellulose (9004-70-0)	
ErC50 algae	579 mg/l
Potassium chlorate (3811-04-9)	
LC50 Fish 1	13500 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 - Crustacea [1]	879.7 mg/l
LC50 Fish 2	1750 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
ErC50 algae	2.8 mg/l
NOEC Chronic Algae	1.5 mg/l
Manganese (7439-96-5)	
LC50 Fish 1	> 3.6 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static])
NOEC Chronic Fish	3.6 mg/l (Exposure time: 96h; Species: Oncorhynchus mykiss)
Copper (7440-50-8)	
LC50 Fish 1	0.0068 – 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 - Crustacea [1]	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Other Aquatic Organisms 1	0.0426 (0.0426 – 0.0535) mg/l (Exposure time: 72 h - Species: Pseudokirchneriella
	subcapitata [static])
LC50 Fish 2	< 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Other Aquatic Organisms 2	0.031 (0.031 – 0.054) mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata
	[static])
Zinc (7440-66-6)	
LC50 Fish 1	2.16 – 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 - Crustacea [1]	0.139 – 0.908 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 Fish 2	0.211 – 0.269 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static])
ErC50 algae	0.15 mg/l
Methanol (67-56-1)	
LC50 Fish 1	28200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 - Crustacea [1]	1340 mg/l
LC50 Fish 2	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
Potassium perchlorate (7778-74-7)	
EC50 - Crustacea [1]	1310 mg/l
Nickel (7440-02-0)	
LC50 Fish 1	100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)
EC50 - Crustacea [1]	121.6 μg/l (Exposure time: 48h - Species: Ceriodaphnia dubia [static])
LC50 Fish 2	15.3 mg/l
EC50 - Crustacea [2]	1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Other Aquatic Organisms 2	0.174 (0.174 – 0.311) mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static])

## 12.2. Persistence and Degradability

POCKET TACTICAL GRENADE, CS	
Persistence and Degradability	May cause long-term adverse effects in the environment.

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Copper (7440-50-8)	
Persistence and Degradability	Not readily biodegradable.
12.2 Rioaccumulative Potential	

### Bioaccumulative Potential

POCKET TACTICAL GRENADE, CS	
Bioaccumulative Potential	Bioaccumulation of metals cannot be excluded.
Charcoal (16291-96-6)	
Partition coefficient n-octanol/water (Log Pow)	(0.3 - <= 3.48 - at 25 °C (at pH 6.97)
Methanol (67-56-1)	
BCF Fish 1	(10 dimensionless)
Partition coefficient n-octanol/water (Log Pow)	-0.77

#### 12.4. **Mobility in Soil**

POCKET TACTICAL GRENADE, CS	
Ecology - Soil	No data available.

#### 12.5. Other Adverse Effects

Other Adverse Effects: None known.

Other Information: Avoid release to the environment.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

## Waste treatment methods

Waste Treatment Methods: Incinerate at a licensed installation.

Sewage Disposal Recommendations: Do not dispose of waste into sewer.

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations

Additional Information: Handle empty containers with care because residual product is flammable.

Ecology - Waste Materials: Avoid unnecessary release into environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways. Avoid release to the environment.

## **SECTION 14: TRANSPORT INFORMATION**

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

#### In Accordance with DOT 14.1.

: TEAR GAS CANDLES **Proper Shipping Name** 

**Hazard Class** : 6.1 **Identification Number** : UN1700 **Label Codes** : 6.1, 4.1 **Packing Group** : 11 : 159 **ERG Number** 





#### 14.2. In Accordance with IMDG

**Proper Shipping Name** : TEAR GAS CANDLES

**Hazard Class** : 6.1 (4.1) **Identification Number** : UN1700 **Label Codes** : 6.1, 4.1

: 11 **Packing Group** EmS-No. (Fire) : F-A EmS-No. (Spillage) : S-G



CARGO AIRCRAFT ONLY

14.4.

**Proper Shipping Name** : TEAR GAS CANDLES

**Hazard Class** : 6.1 (4.1) **Identification Number** : UN1700 **Label Codes** : 6.1, 4.1, **ERG Code (IATA)** : 6Fi

In Accordance with TDG







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**Proper Shipping Name** : TEAR GAS CANDLES

**Hazard Class** : 6.1 **Identification Number** : UN1700 **Label Codes** : 6.1, 4.1

**Packing Group** : 11



## **SECTION 15: REGULATORY INFORMATION**

15.1.	LIC	<b>Federal</b>	Dogu	lations
13.1.	U3	regera	Regu	iations

15.1. US Federal Regulations		
POCKET TACTICAL GRENADE, CS		
SARA Section 311/312 Hazard Classes	Physical ha	zard - Explosive
		ard - Specific target organ toxicity (single or repeated exposure)
		ard - Respiratory or skin sensitization
		ard - Skin corrosion or Irritation
		ard - Serious eye damage or eye irritation
		ard - Acute toxicity (any route of exposure)
	•	zard - Oxidizer (liquid, solid or gas)
	Physical ha	zard - Flammable (gases, aerosols, liquids, or solids)
Charcoal (16291-96-6)		
Listed on the United States TSCA (Toxic Substances	Control Act	inventory - Status: Active
Silicon (7440-21-3)		
Listed on the United States TSCA (Toxic Substances	Control Act	inventory - Status: Active
Potassium nitrate (7757-79-1)		
Listed on the United States TSCA (Toxic Substances	Control Act	inventory - Status: Active
o-Chlorobenzylidene malononitrile (2698-41-1)		
Listed on the United States TSCA (Toxic Substances	Control Act	) inventory - Status: Active
Sucrose (57-50-1)		
Listed on the United States TSCA (Toxic Substances	Control Act	inventory - Status: Active
Nitrocellulose (9004-70-0)		
Listed on the United States TSCA (Toxic Substances	Control Act	inventory - Status: Active
EPA TSCA Regulatory Flag		XU - XU - indicates a substance exempt from reporting under the
		Chemical Data Reporting Rule, (40 CFR 711).
Magnesium carbonates (7757-69-9)		
Listed on the United States TSCA (Toxic Substances	Control Act	inventory - Status: Active
Potassium chlorate (3811-04-9)		
Listed on the United States TSCA (Toxic Substances	Control Act	inventory - Status: Active
Magnesium stearate (557-04-0)		•
Listed on the United States TSCA (Toxic Substances	Control Act	) inventory - Status: Active
Nitrocellulose (9004-70-0)		
Listed on the United States TSCA (Toxic Substances	Control Act	) inventory - Status: Active
EPA TSCA Regulatory Flag		XU - XU - indicates a substance exempt from reporting under the
<i>5</i> , <i>5</i>		Chemical Data Reporting Rule, (40 CFR 711).
Barium chromate (10294-40-3)		
Listed on the United States TSCA (Toxic Substances	Control Act	) inventory - Status: Active
Manganese (7439-96-5)		
Listed on the United States TSCA (Toxic Substances	Control Act	) inventory - Status: Active
Subject to reporting requirements of United States		•
SARA Section 313 - Emission Reporting		1 %
Chromic acid (H2CrO4), lead(2+) salt (1:1) (7758-97	'-6)	
Listed on the United States TSCA (Toxic Substances		) inventory - Status: Active
EPA TSCA Regulatory Flag		SP - SP - indicates a substance that is identified in a proposed

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Significant New Uses Rule.

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Titanium (7440-32-6)
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Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Zirconium (7440-67-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

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Copper (7440-50-8)		
Listed on the United States TSCA (Toxic Substances C	Control Act) inventory - Status: Active	
Subject to reporting requirements of United States S	ARA Section 313	
CERCLA RQ	5000 lb no reporting of releases of this hazardous substance is	
	required if the diameter of the pieces of the solid metal released is	
	>100 μm	
SARA Section 313 - Emission Reporting	1 %	
Zinc (7440-66-6)		
Listed on the United States TSCA (Toxic Substances C	Control Act) inventory - Status: Active	
Subject to reporting requirements of United States S	ARA Section 313	
CERCLA RQ	454 kg no reporting of releases of this hazardous substance is	
	required if the diameter of the pieces of the solid metal released is	
	>100 μm	
SARA Section 313 - Emission Reporting	1 % (dust or fume only)	
Titanium (7440-32-6)		
Listed on the United States TSCA (Toxic Substances C	Control Act) inventory - Status: Active	
Methanol (67-56-1)		
Listed on the United States TSCA (Toxic Substances C	Control Act) inventory - Status: Active	
Subject to reporting requirements of United States S	ARA Section 313	
CERCLA RQ	5000 lb	
SARA Section 313 - Emission Reporting	1 %	
Potassium perchlorate (7778-74-7)		
Listed on the United States TSCA (Toxic Substances C	Control Act) inventory - Status: Active	
Nickel (7440-02-0)		
Listed on the United States TSCA (Toxic Substances C	Control Act) inventory - Status: Active	
Subject to reporting requirements of United States S	ARA Section 313	
CERCLA RQ	100 lb (only applicable if particles are < 100 μm)	
SARA Section 313 - Emission Reporting	0.1 %	
Zirconium (7440-67-7)		
Listed on the United States TSCA (Toxic Substances C	Control Act) inventory - Status: Active	
Potassium perchlorate (7778-74-7)		
Listed on the United States TSCA (Toxic Substances C	Control Act) inventory - Status: Active	
E.O. H.C.C. L. D. L. L.C.		

## 15.2. US State Regulations

## **California Proposition 65**



**WARNING:** This product can expose you to Nickel, which is known to the State of California to cause cancer, and Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
Chromic acid, lead(2+) salt (1:1) (7758-97-6)	X			
Barium chromate (10294-40-3)	X			
Methanol (67-56-1)		X		
Nickel (7440-02-0)	X			

## Silicon (7440-21-3)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List

## Potassium nitrate (7757-79-1)

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According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List

### o-Chlorobenzylidene malononitrile (2698-41-1)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List

## Sucrose (57-50-1)

- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List

## Nitrocellulose (9004-70-0)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List

### Potassium chlorate (3811-04-9)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List

## Barium chromate (10294-40-3)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Massachusetts Right To Know List

## Manganese (7439-96-5)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List

### Chromic acid (H2CrO4), lead(2+) salt (1:1) (7758-97-6)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List
- U.S. Pennsylvania RTK (Right to Know) Special Hazardous Substances
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List

## Titanium (7440-32-6)

U.S. - New Jersey - Right to Know Hazardous Substance List

## Zirconium (7440-67-7)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List

## Zinc (7440-66-6)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List

## Titanium (7440-32-6)

U.S. - New Jersey - Right to Know Hazardous Substance List

## Methanol (67-56-1)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List

## Potassium perchlorate (7778-74-7)

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- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List

### Nickel (7440-02-0)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List
- U.S. Pennsylvania RTK (Right to Know) Special Hazardous Substances
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List

### Zirconium (7440-67-7)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List

## Hafnium (7440-58-6)

### Potassium perchlorate (7778-74-7)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List

## 15.3. Canadian Regulations

## Charcoal (16291-96-6)

Listed on the Canadian DSL (Domestic Substances List)

## Silicon (7440-21-3)

Listed on the Canadian DSL (Domestic Substances List)

## Potassium nitrate (7757-79-1)

Listed on the Canadian DSL (Domestic Substances List)

## o-Chlorobenzylidene malononitrile (2698-41-1)

Listed on the Canadian NDSL (Non-Domestic Substances List)

### Sucrose (57-50-1)

Listed on the Canadian DSL (Domestic Substances List)

## Nitrocellulose (9004-70-0)

Listed on the Canadian DSL (Domestic Substances List)

## Magnesium carbonates (7757-69-9)

Listed on the Canadian DSL (Domestic Substances List)

## Potassium chlorate (3811-04-9)

Listed on the Canadian DSL (Domestic Substances List)

## Magnesium stearate (557-04-0)

Listed on the Canadian DSL (Domestic Substances List)

## Nitrocellulose (9004-70-0)

Listed on the Canadian DSL (Domestic Substances List)

## Barium chromate (10294-40-3)

Listed on the Canadian DSL (Domestic Substances List)

## Manganese (7439-96-5)

Listed on the Canadian DSL (Domestic Substances List)

## Chromic acid (H2CrO4), lead(2+) salt (1:1) (7758-97-6)

Listed on the Canadian DSL (Domestic Substances List)

## Titanium (7440-32-6)

Listed on the Canadian DSL (Domestic Substances List)

## Zirconium (7440-67-7)

Listed on the Canadian DSL (Domestic Substances List)

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According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Zinc (7440-66-
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Listed on the Canadian DSL (Domestic Substances List)

## Titanium (7440-32-6)

Listed on the Canadian DSL (Domestic Substances List)

## Methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

## Potassium perchlorate (7778-74-7)

Listed on the Canadian DSL (Domestic Substances List)

## Nickel (7440-02-0)

Listed on the Canadian DSL (Domestic Substances List)

## Zirconium (7440-67-7)

Listed on the Canadian DSL (Domestic Substances List)

## Potassium perchlorate (7778-74-7)

Listed on the Canadian DSL (Domestic Substances List)

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Date of Preparation or Latest** 

Revision

: 01/18/2023

**Indication of Changes** 

- : New format. Changes to Hazards Identification, Composition/Information on Ingredients, First Aid Measures, Fire-Fighting Measures, Accidental release Measures, Handling and Storage, Exposire Controls, Personal Protection, Physical and Chemical Properties, Stability and Reactivity, Toxicological Information, Ecological Information, Disposal Considerations,
  - and Regulatory Information.

**Other Information** 

: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

## **GHS Full Text Phrases:**

H225	Highly flammable liquid and vapor
H228	Flammable solid
H250	Catches fire spontaneously if exposed to air
H251	Self-heating; may catch fire
H252	Self-heating in large quantities; may catch fire
H260	In contact with water releases flammable gases which may ignite spontaneously
H261	In contact with water releases flammable gas
H271	May cause fire or explosion; strong oxidizer
H272	May intensify fire; oxidizer
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic 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 an allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H350	May cause cancer
H351	Suspected of causing cancer

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H370	Causes damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful 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

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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