

Black Beauty IRON

Safety Data Sheet

According To Federal Register / Vol. 89, No. 98 / Monday, May 20, 2024 / Rules And Regulations And According To The Hazardous Products Regulation (December 15, 2022).
Revision Date: 02/09/2026 Date of Issue: 02/09/26 Version: 3.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Black Beauty Iron

1.2 Recommended Use and Restrictions on Use

Use Of The Substance/Mixture : Abrasives

Restrictions On Use : No additional information available

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

Company

Reed Minerals, LLC

350 Poplar Church Road

Camp Hill, PA 17011

USA

Phone: 1-888-415-3316

E-Mail: reedcs@reedminerals.com

1.4. Emergency Telephone Number

Emergency Number : Verisk 3E

855-393-9889 (Access Code: 13793)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Skin corrosion/irritation, Category 2 H315

Serious eye damage/eye irritation, Category 2A H319

Carcinogenicity, Category 1A H350

Reproductive toxicity, Category 1A H360

Reproductive toxicity, Additional category for effects on or via lactation H362

Specific target organ toxicity, Repeated exposure, Category 1 H372

Hazardous to the aquatic environment, Acute Hazard, Category 3 H402

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)

: Danger

Hazard Statements (GHS-US/CA)

: H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H350 - May cause cancer.
H360 - May damage fertility or the unborn child.
H362 - May cause harm to breast-fed children.
H372 - Causes damage to organs through prolonged or repeated exposure.
H402 - Harmful to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements (GHS-US/CA)

: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust.
P263 - Avoid contact during pregnancy and while nursing.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.

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P273 - Avoid release to the environment.
 P280 - Wear eye protection, face protection, protective clothing and protective gloves.
 P302+P352 - IF ON SKIN: Wash with plenty of water.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P313 - IF exposed or concerned: Get medical advice or attention.
 P314 - Get medical advice or attention if you feel unwell.
 P321 - Specific treatment (see supplemental first aid instruction on this label).
 P332+P313 - If skin irritation occurs: Get medical advice or attention.
 P337+P313 - If eye irritation persists: Get medical advice or attention.
 P362+P364 - Take off contaminated clothing and wash it before reuse.
 P405 - Store locked up.
 P501 - Dispose of local, regional, national, territorial, provincial, and international regulations. to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3 Hazards associated with known or reasonably anticipated uses

(If this product is used in unforeseeable chemical processes and not used as intended or reasonable, the hazards listed in Section 2.3 cannot cover all chemistries. Therefore, a Process Hazard Analysis (PHA) or other hazard assessment for additional specific end uses should be performed to ensure that hazards are fully understood, and adequate safety measures are in place. See Section 10 for relevant reactivity and stability information)

2.4. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.5. Unknown Acute Toxicity (GHS-US/CA)

No additional information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Iron oxide (Fe ₂ O ₃)	C.I. 77491 / C.I. Pigment Red 101 / Diiron trioxide / Ferric oxide / Iron sesquioxide / Iron(III) oxide / Red Iron Oxide / Rouge / CI 77491 / Iron trioxide / Sienna / Pigment Red 101 / Red iron oxide / Red iron oxide pigment / Iron Oxide Red / Diiron(III) trioxide / Iron oxide / Ferric oxide red / Iron oxide, red / Iron oxide fume	(CAS-No.) 1309-37-1	20 – 80	Combustible dust
Silica, vitreous	Silica, fused / Fused silica / Silica - fused / Silica, amorphous (fused) / Silicon dioxide / Vitreous silica / Silica - amorphous, fused / GR 90 / Silica fused / Silica (fused) / Silica, fused, amorphous / Silica, vitreous (coatings) / Fused quartz / Quartz glass / Silica melted (quartz glass) / Amorphous silica / Silica	(CAS-No.) 60676-86-0	20 – 60	STOT RE 2, H373
Aluminum oxide (Al ₂ O ₃)	Aluminum oxide / .alpha.- Alumina / Alumina / Aluminium oxide / Aluminium oxide (Al ₂ O ₃) / .alpha.- Aluminum oxide / Alundum / ALUMINA / Dialuminium trioxide / Dialuminum trioxide	(CAS-No.) 1344-28-1	10 – 40	Not classified.

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Calcium oxide**	Lime / Quicklime / CALCIUM OXIDE / Quicklime (CaO) / Calcium oxide (CaO) / Lime (calcium oxide)	(CAS-No.) 1305-78-8	2 – 6	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Magnesium oxide (MgO)	Calcined magnesite / Magnesium oxide / MAGNESIUM OXIDE / Magnesia / C.I. 77711	(CAS-No.) 1309-48-4	0.1 – 2	Not classified.
Sodium oxide (Na ₂ O)**	Disodium oxide / Sodium oxide / SODIUM OXIDE / Sodium monoxide	(CAS-No.) 1313-59-3	0.1 – 2	PHNOC 1 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 1, H370
Sulfur trioxide	Sulfuric anhydride / Sulphur trioxide / Sulphur trioxide, stabilized / Sulfur trioxide, stabilized / Sulphuric anhydride / Sulfur(VI) oxide / sulfur trioxide	(CAS-No.) 7446-11-9	0.1 – 2	Met. Corr. 1, H290 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1A, H314 Eye Dam. 1, H318
Lead	C.I. Pigment Metal 4 / Lead metal / Lead, elemental / C.I. 77575 / Lead massive / Lead (massive and powder form)	(CAS-No.) 7439-92-1	0.1 – 1	Carc. 1B, H350 Repr. 1A, H360 Lact., H362 STOT RE 1, H372 Combustible dust
Molybdenum	Molybdenum metal / Molybdenum, elemental / Molybdenum, metal / Molybdenum, metallic / molybdenum	(CAS-No.) 7439-98-7	0.1 – 1	Repr. 2, H361 Combustible dust
Copper	C.I. 77400 / C.I. Pigment Metal 2 / Copper, elemental / CI 77400 / Copper metal / Copper, metallic / Pigment Metal 2 / Granulated copper / copper / Copper, granulated	(CAS-No.) 7440-50-8	0.1 – 1	Not classified.
Arsenic	Arsenic, elemental / Arsenic, inorganic	(CAS-No.) 7440-38-2	0.1 – 0.5	Acute Tox. 2 (Oral), H300 Acute Tox. 3 (Inhalation), H331 Carc. 1A, H350 Repr. 1A, H360 STOT SE 1, H370 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Quartz	Quartz (SiO ₂) / Silica, crystalline, quartz / Crystalline silica, quartz / .alpha.-Quartz / Silica, crystalline, .alpha.-quartz / QUARTZ / Crystalline silica in the form of quartz / Quartz, silica / Quartz (respirable fraction) / Silica, crystalline-.alpha.quartz / Silica, .alpha.-quartz / Silicon dioxide / Silica, quartz / Silica, crystalline / Quartz (crystalline silica) / QUARTZ POWDER / Silica, crystalline (quartz)	(CAS-No.) 14808-60-7	< 0.1	Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372
Silica, crystalline, tripoli	Silica-tripoli / Silica, crystalline - tripoli / Silica-crystalline, tripoli / Tripoli / Silica, crystalline tripoli / Silica,	(CAS-No.) 1317-95-9	< 0.1	Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372

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	tripoli / Silica - crystalline, tripoli / Silica - tripoli / Silica crystalline, tripoli / Silica (crystalline, tripoli) / Microcrystalline silica, tripoli / Crystalline silica, tripoli			
Nickel	Nickel metal / Nickel, elemental / Nickel, metallic / Nickel, metal / C.I. 77775 / Nickel (Metallic) / Nickel catalyst, dry	(CAS-No.) 7440-02-0	< 0.1	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372
Manganese	Manganese, elemental / Manganese metal / manganese / Manganese (Mn)	(CAS-No.) 7439-96-5	< 0.1	STOT RE 2, H373 Comb. Dust
Cadmium	Cadmium, elemental / Cadmium metal / Cadmium (non-pyrophoric) / C.I. 77180 / Cadmium (pyrophoric)	(CAS-No.) 7440-43-9	≤ 0.005	Pyr. Sol. 1, H250 Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation:dust,mist), H330 Muta. 2, H341 Carc. 1B, H350 Repr. 2, H361 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Beryllium	Beryllium, elemental / Beryllium metal / Beryllium, metal / Beryllium powder	(CAS-No.) 7440-41-7	≤ 0.0005	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Inhalation), H330 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372 Combustible dust

Full text of H-statements: see section 16

*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%).

** Sodium Oxide and Calcium Oxide are chemically bound within a stable silica matrix and are unable to generate hydroxides upon contact with moisture, making the material unlikely to cause chemical burns under normal handling conditions.

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: Using proper respiratory protection, immediately move the exposed person to fresh air. Encourage exposed person to cough, spit out, and blow nose to remove dust. Obtain medical attention if breathing difficulty persists.

Skin Contact: Immediately drench affected area with water for at least 15 minutes. Remove contaminated clothing. If exposed or concerned: Get medical advice/attention.

Eye Contact: Immediately rinse with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

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

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: May cause cancer. Causes damage to organs through prolonged or repeated exposure. Causes skin irritation. May damage fertility. May damage the unborn child. May cause harm to breast-fed children. Causes serious eye irritation.

Inhalation: Prolonged exposure may cause irritation. Cough, dyspnea (breathing difficulty), wheezing; decreased pulmonary function, progressive respiratory symptoms (silicosis). The lungs become very inflamed and may fill with fluid, causing severe shortness of breath and low blood oxygen levels. Inflammation, scarring, and symptoms progress faster in accelerated silicosis than in simple silicosis. Progressive massive fibrosis may occur in simple or accelerated silicosis, but is more common in the accelerated form. Progressive massive fibrosis results from severe scarring and leads to the destruction of normal lung structures.

Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

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

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: May cause cancer. Causes damage to organs through prolonged or repeated exposure. May damage fertility or the unborn child. This product contains crystalline silica. Long term exposure to respirable crystalline silica results in a significant risk of developing silicosis; a seriously disabling and fatal lung disease, and other non-malignant respiratory disease, lung cancer, kidney effects, and immune system effects. Pulmonary function may be reduced and pre-existing lung diseases such as emphysema or asthma may be aggravated by inhalation exposure to dusts. Smoking aggravates the effects of exposure. Inhalation may lead to a progressive massive fibrosis which may be accompanied by right heart enlargement, heart failure, pulmonary failure of the lung and susceptibility to pulmonary tuberculosis.

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. Treatment will be based on severity and prognosis of disease.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, fog, carbon dioxide (CO₂), alcohol-resistant foam, or dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions. Silicates dissolve in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Silicates react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.

5.3. Advice for Firefighters

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

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

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

Hazardous Combustion Products:

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: Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not handle until all safety precautions have been read and understood.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: 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. Ventilate area.

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: Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Recover the product by vacuuming, shoveling or sweeping. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Avoid actions that cause dust to become airborne during clean-up such as dry sweeping or using compressed air. Use HEPA vacuum or thoroughly wet with water to clean-up dust. Use PPE described in Section 8.

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: Cutting, crushing or grinding crystalline silica-bearing materials may release respirable crystalline silica, a known carcinogen. Use all appropriate measures of dust control or suppression and personal protective equipment. Practice good housekeeping - spillage can be slippery on smooth surface either wet or dry.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Avoid contact with eyes, skin and clothing. Avoid contact during pregnancy/while nursing. Avoid creating or spreading dust.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area.

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

7.3. Specific End Use(s)

Abrasives

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.

Iron oxide (Fe ₂ O ₃) (1309-37-1)		
USA ACGIH	ACGIH® TLV® TWA	5 mg/m ³ (respirable particulate matter)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA OSHA	OSHA PEL TWA	10 mg/m ³ (fume) 15 mg/m ³ (total dust (Rouge)) 5 mg/m ³ (respirable fraction (Rouge))
USA NIOSH	NIOSH REL TWA	5 mg/m ³ (dust and fume)
USA IDLH	IDLH	2500 mg/m ³ (dust and fume)
Alberta	OEL TWA	5 mg/m ³ (respirable)
British Columbia	OEL STEL	10 mg/m ³ (fume)
British Columbia	OEL TWA	10 mg/m ³ (regulated under Rouge-total particulate (Rouge)) 3 mg/m ³ (regulated under Rouge: particulate matter containing no Asbestos and <1% Crystalline silica-respirable particulate (Rouge)) 5 mg/m ³ (dust and fume)
Manitoba	OEL TWA	5 mg/m ³ (respirable particulate matter)
New Brunswick	OEL TWA	5 mg/m ³ (respirable fraction)
Newfoundland & Labrador	OEL TWA	5 mg/m ³ (respirable particulate matter)
Nova Scotia	OEL TWA	5 mg/m ³ (respirable particulate matter)
Nunavut	OEL STEL	10 mg/m ³ (dust and fume) 20 mg/m ³ (regulated under Rouge)
Nunavut	OEL TWA	5 mg/m ³ (dust and fume) 10 mg/m ³ (regulated under Rouge)

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Northwest Territories	OEL STEL	10 mg/m ³ (dust and fume) 20 mg/m ³ (regulated under Rouge)
Northwest Territories	OEL TWA	5 mg/m ³ (dust and fume) 10 mg/m ³ (regulated under Rouge)
Ontario	OEL TWAEV	5 mg/m ³ (respirable particulate matter)
Prince Edward Island	OEL TWA	5 mg/m ³ (respirable particulate matter)
Québec	VEMP (OEL TWAEV)	5 mg/m ³ (dust and fume)
Saskatchewan	OEL STEL	10 mg/m ³ (dust and fume) 20 mg/m ³ (regulated under Rouge)
Saskatchewan	OEL TWA	5 mg/m ³ (dust and fume) 10 mg/m ³ (regulated under Rouge)
Yukon	OEL STEL	10 mg/m ³ (fume) 20 mg/m ³ (regulated under Rouge)
Yukon	OEL TWA	5 mg/m ³ (fume) 30 mppcf (regulated under Rouge) 10 mg/m ³ (regulated under Rouge)
Aluminum oxide (Al₂O₃) (1344-28-1)		
USA ACGIH	ACGIH® TLV® TWA	10 mg/m ³
USA OSHA	OSHA PEL TWA	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
Alberta	OEL TWA	10 mg/m ³
Nunavut	OEL STEL	20 mg/m ³
Nunavut	OEL TWA	10 mg/m ³
Northwest Territories	OEL STEL	20 mg/m ³
Northwest Territories	OEL TWA	10 mg/m ³
Québec	VEMP (OEL TWAEV)	10 mg/m ³ (containing no Asbestos and <1% Crystalline silica-total dust)
Saskatchewan	OEL STEL	20 mg/m ³
Saskatchewan	OEL TWA	10 mg/m ³
Yukon	OEL STEL	20 mg/m ³ (Al ₂ O ₃)
Yukon	OEL TWA	30 mppcf (Al ₂ O ₃) 10 mg/m ³ (Al ₂ O ₃)
Quartz (14808-60-7)		
USA ACGIH	ACGIH® TLV® TWA	0.025 mg/m ³ (respirable particulate matter)
USA ACGIH	ACGIH chemical category	Suspected Human Carcinogen
USA OSHA	OSHA PEL TWA	50 µg/m ³ (Respirable crystalline silica)
USA OSHA	OSHA PEL TWA	(250)/(%SiO ₂ +5) mppcf TWA (respirable fraction) (10)/(%SiO ₂ +2) mg/m ³ TWA (respirable fraction) (For any operations or sectors for which the respirable crystalline silica standard, 1910.1053, is stayed or otherwise not in effect, See 20 CFR 1910.1000 TABLE Z-3)
USA NIOSH	NIOSH REL TWA	0.05 mg/m ³ (respirable dust)
USA IDLH	IDLH	50 mg/m ³ (respirable dust)
Alberta	OEL TWA	0.025 mg/m ³ (respirable particulate)
British Columbia	OEL TWA	0.025 mg/m ³ (respirable)
Manitoba	OEL TWA	0.025 mg/m ³ (respirable particulate matter)
New Brunswick	OEL TWA	0.025 mg/m ³ (respirable fraction)
Newfoundland & Labrador	OEL TWA	0.025 mg/m ³ (respirable particulate matter)
Nova Scotia	OEL TWA	0.025 mg/m ³ (respirable particulate matter)
Nunavut	OEL TWA	0.05 mg/m ³ (Trydimite removed-respirable fraction (Silica - crystalline))

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Northwest Territories	OEL TWA	0.05 mg/m ³ (Trydimite removed-respirable fraction (Silica - crystalline))
Ontario	OEL TWAEV	0.1 mg/m ³ (designated substances regulation-respirable fraction (Silica, crystalline))
Prince Edward Island	OEL TWA	0.025 mg/m ³ (respirable particulate matter)
Québec	VEMP (OEL TWAEV)	0.1 mg/m ³ (respirable dust)
Saskatchewan	OEL TWA	0.05 mg/m ³ (Trydimite removed-respirable fraction (Silica - crystalline (Trydimite removed)))
Yukon	OEL TWA	300 particle/mL (Silica - Quartz, crystalline)
Magnesium oxide (MgO) (1309-48-4)		
USA ACGIH	ACGIH® TLV® TWA	10 mg/m ³ (inhalable particulate matter)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA OSHA	OSHA PEL TWA	15 mg/m ³ (fume, total particulate)
USA IDLH	IDLH	750 mg/m ³ (fume)
Alberta	OEL TWA	10 mg/m ³ (fume)
British Columbia	OEL STEL	10 mg/m ³ (respirable dust and fume)
British Columbia	OEL TWA	10 mg/m ³ (fume, inhalable) 3 mg/m ³ (respirable dust and fume)
Manitoba	OEL TWA	10 mg/m ³ (inhalable particulate matter)
New Brunswick	OEL TWA	10 mg/m ³ (inhalable fraction)
Newfoundland & Labrador	OEL TWA	10 mg/m ³ (inhalable particulate matter)
Nova Scotia	OEL TWA	10 mg/m ³ (inhalable particulate matter)
Nunavut	OEL STEL	20 mg/m ³ (inhalable fraction)
Nunavut	OEL TWA	10 mg/m ³ (inhalable fraction)
Northwest Territories	OEL STEL	20 mg/m ³ (inhalable fraction)
Northwest Territories	OEL TWA	10 mg/m ³ (inhalable fraction)
Ontario	OEL TWAEV	10 mg/m ³ (inhalable particulate matter)
Prince Edward Island	OEL TWA	10 mg/m ³ (inhalable particulate matter)
Québec	VEMP (OEL TWAEV)	10 mg/m ³ (inhalable dust)
Saskatchewan	OEL STEL	20 mg/m ³ (inhalable fraction)
Saskatchewan	OEL TWA	10 mg/m ³ (inhalable fraction)
Yukon	OEL STEL	10 mg/m ³ (fume)
Yukon	OEL TWA	10 mg/m ³ (fume)
Silica, vitreous (60676-86-0)		
USA OSHA	OSHA PEL TWA	20 mppcf (respirable dust)
USA OSHA	OSHA PEL TWA	(80)/(%SiO ₂) mg/m ³ 20 mppcf (See 29 CFR 1910.1000 TABLE Z-3)
Nunavut	OEL TWA	0.1 mg/m ³ (respirable fraction (Silica amorphous))
Northwest Territories	OEL TWA	0.1 mg/m ³ (respirable fraction (Silica amorphous))
Ontario	OEL TWAEV	0.1 mg/m ³ (respirable fraction)
Saskatchewan	OEL TWA	0.1 mg/m ³ (respirable fraction (Silica amorphous))
Yukon	OEL TWA	300 particle/mL (Silica, fused or flour)
Calcium oxide (1305-78-8)		
USA ACGIH	ACGIH® TLV® TWA	2 mg/m ³
USA OSHA	OSHA PEL TWA	5 mg/m ³
USA NIOSH	NIOSH REL TWA	2 mg/m ³
USA IDLH	IDLH	25 mg/m ³
Alberta	OEL TWA	2 mg/m ³
British Columbia	OEL TWA	2 mg/m ³
Manitoba	OEL TWA	2 mg/m ³
New Brunswick	OEL TWA	2 mg/m ³

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Newfoundland & Labrador	OEL TWA	2 mg/m ³
Nova Scotia	OEL TWA	2 mg/m ³
Nunavut	OEL STEL	4 mg/m ³
Nunavut	OEL TWA	2 mg/m ³
Northwest Territories	OEL STEL	4 mg/m ³
Northwest Territories	OEL TWA	2 mg/m ³
Ontario	OEL TWAEV	2 mg/m ³
Prince Edward Island	OEL TWA	2 mg/m ³
Québec	VEMP (OEL TWAEV)	2 mg/m ³
Saskatchewan	OEL STEL	4 mg/m ³
Saskatchewan	OEL TWA	2 mg/m ³
Yukon	OEL STEL	4 mg/m ³
Yukon	OEL TWA	2 mg/m ³
Lead (7439-92-1)		
USA ACGIH	ACGIH® TLV® TWA	0.05 mg/m ³
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA ACGIH	BEI	200 µg/l Parameter: Lead - Medium: blood - Sampling time: not critical (Note: Persons applying this BEI are encouraged to counsel female workers of child-bearing age about the risk of delivering a child with a PbB (lead in blood level) over the current CDC reference value.)
USA OSHA	OSHA PEL TWA	50 µg/m ³
USA OSHA	OSHA Action Level/Excursion Limit	30 µg/m ³ (Action Level, see 29 CFR 1910.1025)
USA NIOSH	NIOSH REL TWA	0.05 mg/m ³
USA IDLH	IDLH	100 mg/m ³
Alberta	OEL TWA	0.05 mg/m ³
British Columbia	OEL TWA	0.05 mg/m ³
Manitoba	OEL TWA	0.05 mg/m ³
New Brunswick	OEL TWA	0.05 mg/m ³
Newfoundland & Labrador	OEL TWA	0.05 mg/m ³
Nova Scotia	OEL TWA	0.05 mg/m ³
Nunavut	OEL STEL	0.15 mg/m ³
Nunavut	OEL TWA	0.05 mg/m ³
Northwest Territories	OEL STEL	0.15 mg/m ³
Northwest Territories	OEL TWA	0.05 mg/m ³
Ontario	OEL TWAEV	0.05 mg/m ³ (designated substances regulation) 0.05 mg/m ³ (applies to workplaces to which the designated substances regulation does not apply)
Prince Edward Island	OEL TWA	0.05 mg/m ³
Québec	VEMP (OEL TWAEV)	0.05 mg/m ³
Saskatchewan	OEL STEL	0.15 mg/m ³
Saskatchewan	OEL TWA	0.05 mg/m ³
Yukon	OEL STEL	0.45 mg/m ³ (dust and fume)
Yukon	OEL TWA	0.15 mg/m ³ (dust and fume)
Molybdenum (7439-98-7)		
USA ACGIH	ACGIH® TLV® TWA	10 mg/m ³ (inhalable particulate matter) 3 mg/m ³ (respirable particulate matter)
USA OSHA	OSHA PEL TWA	5 mg/m ³ (Molybdenum (as Mo), Soluble Compounds) 15 mg/m ³ (Molybdenum (as Mo), Insoluble Compounds (Total dust))
USA NIOSH	NIOSH REL TWA	5 mg/m ³ (Molybdenum (as Mo), Soluble Compounds)

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USA IDLH	IDLH	5000 mg/m ³
Alberta	OEL TWA	10 mg/m ³ (total) 3 mg/m ³ (respirable)
British Columbia	OEL TWA	3 mg/m ³ (respirable) 10 mg/m ³ (inhalable)
Manitoba	OEL TWA	10 mg/m ³ (inhalable particulate matter) 3 mg/m ³ (respirable particulate matter)
New Brunswick	OEL TWA	10 mg/m ³ (inhalable fraction) 3 mg/m ³ (respirable fraction)
Newfoundland & Labrador	OEL TWA	10 mg/m ³ (inhalable particulate matter) 3 mg/m ³ (respirable particulate matter)
Nova Scotia	OEL TWA	10 mg/m ³ (inhalable particulate matter) 3 mg/m ³ (respirable particulate matter)
Nunavut	OEL STEL	20 mg/m ³ (metal-inhalable fraction) 6 mg/m ³ (metal-respirable fraction)
Nunavut	OEL TWA	10 mg/m ³ (metal-inhalable fraction) 3 mg/m ³ (metal-respirable fraction)
Northwest Territories	OEL STEL	20 mg/m ³ (metal-inhalable fraction) 6 mg/m ³ (metal-respirable fraction)
Northwest Territories	OEL TWA	10 mg/m ³ (metal-inhalable fraction) 3 mg/m ³ (metal-respirable fraction)
Ontario	OEL TWAEV	10 mg/m ³ (metal-inhalable particulate matter) 3 mg/m ³ (metal-respirable particulate matter)
Prince Edward Island	OEL TWA	10 mg/m ³ (inhalable particulate matter) 3 mg/m ³ (respirable particulate matter)
Québec	VEMP (OEL TWAEV)	10 mg/m ³ (inhalable dust) 3 mg/m ³ (respirable dust)
Saskatchewan	OEL STEL	20 mg/m ³ (inhalable fraction) 6 mg/m ³ (respirable fraction)
Saskatchewan	OEL TWA	10 mg/m ³ (inhalable fraction) 3 mg/m ³ (respirable fraction)
Arsenic (7440-38-2)		
USA ACGIH	ACGIH® TLV® TWA	0.01 mg/m ³
USA ACGIH	ACGIH chemical category	Confirmed Human Carcinogen
USA ACGIH	BEI	15 µg/g Kreatinin Parameter: inorganic arsenic plus methylated metabolites in urine - Medium: urine - Sampling time: end of shift at end of workweek (population based)
USA NIOSH	NIOSH REL C	0.002 mg/m ³
USA IDLH	IDLH	5 mg/m ³
Alberta	OEL TWA	0.01 mg/m ³
British Columbia	OEL TWA	0.01 mg/m ³
Manitoba	OEL TWA	0.01 mg/m ³
New Brunswick	OEL TWA	0.01 mg/m ³
Newfoundland & Labrador	OEL TWA	0.01 mg/m ³
Nova Scotia	OEL TWA	0.01 mg/m ³
Nunavut	OEL STEL	0.03 mg/m ³
Nunavut	OEL TWA	0.01 mg/m ³
Northwest Territories	OEL STEL	0.03 mg/m ³
Northwest Territories	OEL TWA	0.01 mg/m ³
Ontario	OEL TWAEV	0.05 mg/m ³ (designated substances regulation)

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Ontario	OEL TWAEV	0.01 mg/m ³ (designated substances regulation) 0.01 mg/m ³ (applies to workplaces to which the designated substances regulation does not apply)
Prince Edward Island	OEL TWA	0.01 mg/m ³
Québec	VEMP (OEL TWAEV)	0.01 mg/m ³
Saskatchewan	OEL STEL	0.03 mg/m ³
Saskatchewan	OEL TWA	0.01 mg/m ³
Yukon	OEL STEL	0.5 mg/m ³
Yukon	OEL TWA	0.5 mg/m ³
Silica, crystalline, tripoli (1317-95-9)		
USA ACGIH	ACGIH® TLV® TWA	0.025 mg/m ³ (respirable particulate matter)
USA ACGIH	ACGIH chemical category	Suspected Human Carcinogen
USA NIOSH	NIOSH REL TWA	0.05 mg/m ³ (respirable dust)
USA IDLH	IDLH	50 mg/m ³ (respirable dust)
British Columbia	OEL TWA	0.025 mg/m ³ (.alpha. Quartz-respirable)
Manitoba	OEL TWA	0.025 mg/m ³ (respirable particulate matter)
New Brunswick	OEL TWA	0.025 mg/m ³ (respirable fraction)
Newfoundland & Labrador	OEL TWA	0.025 mg/m ³ (respirable particulate matter)
Nova Scotia	OEL TWA	0.025 mg/m ³ (respirable particulate matter)
Nunavut	OEL TWA	0.1 mg/m ³ (Trydimite removed-respirable fraction (Silica - crystalline))
Northwest Territories	OEL TWA	0.1 mg/m ³ (Trydimite removed-respirable fraction (Silica - crystalline))
Ontario	OEL TWAEV	0.1 mg/m ³ (designated substances regulation-respirable fraction (Silica, crystalline))
Prince Edward Island	OEL TWA	0.025 mg/m ³ (respirable particulate matter)
Québec	VEMP (OEL TWAEV)	0.1 mg/m ³ (respirable dust)
Saskatchewan	OEL TWA	0.1 mg/m ³ (Trydimite removed-respirable fraction (Silica - crystalline (Trydimite removed)))
Yukon	OEL TWA	300 particle/mL (Silica)
Nickel (7440-02-0)		
USA ACGIH	ACGIH® TLV® TWA	1.5 mg/m ³ (inhalable particulate matter)
USA ACGIH	ACGIH chemical category	Not Suspected as a Human Carcinogen
USA ACGIH	BEI	5 µg/l Parameter: Nickel - Medium: urine - Sampling time: post-shift at end of workweek (background)
USA OSHA	OSHA PEL TWA	1 mg/m ³
USA NIOSH	NIOSH REL TWA	0.015 mg/m ³
USA IDLH	IDLH	10 mg/m ³
Alberta	OEL TWA	1.5 mg/m ³
British Columbia	OEL TWA	0.05 mg/m ³
Manitoba	OEL TWA	1.5 mg/m ³ (inhalable particulate matter)
New Brunswick	OEL TWA	1.5 mg/m ³ (inhalable fraction)
Newfoundland & Labrador	OEL TWA	1.5 mg/m ³ (inhalable particulate matter)
Nova Scotia	OEL TWA	1.5 mg/m ³ (inhalable particulate matter)
Nunavut	OEL STEL	3 mg/m ³ (inhalable fraction)
Nunavut	OEL TWA	1.5 mg/m ³ (inhalable fraction)
Northwest Territories	OEL STEL	3 mg/m ³ (inhalable fraction)
Northwest Territories	OEL TWA	1.5 mg/m ³ (inhalable fraction)
Ontario	OEL TWAEV	1 mg/m ³ (inhalable fraction)
Prince Edward Island	OEL TWA	1.5 mg/m ³ (inhalable particulate matter)
Québec	VEMP (OEL TWAEV)	1.5 mg/m ³ (inhalable dust)
Saskatchewan	OEL STEL	3 mg/m ³ (inhalable fraction)

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Saskatchewan	OEL TWA	1.5 mg/m ³ (inhalable fraction)
Yukon	OEL STEL	3 mg/m ³
Yukon	OEL TWA	1 mg/m ³
Cadmium (7440-43-9)		
USA ACGIH	ACGIH® TLV® TWA	0.01 mg/m ³ 0.002 mg/m ³ (respirable particulate matter)
USA ACGIH	ACGIH chemical category	Suspected Human Carcinogen
USA ACGIH	BEI	5 µg/g Kreatinin Parameter: Cadmium - Medium: urine - Sampling time: not critical (background) 5 µg/l Parameter: Cadmium - Medium: blood - Sampling time: not critical (background)
USA OSHA	OSHA PEL TWA	5 µg/m ³
USA OSHA	OSHA PEL C	0.3 mg/m ³ (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect- fume) 0.6 mg/m ³ (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect- dust)
USA OSHA	OSHA Action Level/Excursion Limit	2.5 µg/m ³ (Action Level, see 29 CFR 1910.1027)
USA IDLH	IDLH	9 mg/m ³ (dust)
Alberta	OEL TWA	0.01 mg/m ³
British Columbia	OEL TWA	0.01 mg/m ³ 0.002 mg/m ³ (respirable)
Manitoba	OEL TWA	0.01 mg/m ³ 0.002 mg/m ³ (respirable particulate matter)
New Brunswick	OEL TWA	0.01 mg/m ³ 0.002 mg/m ³ (respirable fraction)
Newfoundland & Labrador	OEL TWA	0.01 mg/m ³ 0.002 mg/m ³ (respirable particulate matter)
Nova Scotia	OEL TWA	0.01 mg/m ³ 0.002 mg/m ³ (respirable particulate matter)
Nunavut	OEL STEL	0.03 mg/m ³ (total fraction) 0.006 mg/m ³ (respirable fraction)
Nunavut	OEL TWA	0.01 mg/m ³ (total fraction) 0.002 mg/m ³ (respirable fraction)
Northwest Territories	OEL STEL	0.03 mg/m ³ (total fraction) 0.006 mg/m ³ (respirable fraction)
Northwest Territories	OEL TWA	0.01 mg/m ³ (total fraction) 0.002 mg/m ³ (respirable fraction)
Ontario	OEL TWAEV	0.01 mg/m ³ 0.002 mg/m ³ (respirable particulate matter)
Prince Edward Island	OEL TWA	0.01 mg/m ³ 0.002 mg/m ³ (respirable particulate matter)
Québec	VEMP (OEL TWAEV)	0.01 mg/m ³ 0.005 mg/m ³ (respirable-respirable aerosol fraction)
Saskatchewan	OEL STEL	0.03 mg/m ³ (total) 0.006 mg/m ³ (respirable fraction)
Saskatchewan	OEL TWA	0.01 mg/m ³ (total) 0.002 mg/m ³ (respirable fraction)
Yukon	OEL STEL	0.15 mg/m ³ (dust)
Yukon	OEL TWA	0.05 mg/m ³ (dust)
Beryllium (7440-41-7)		

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USA ACGIH	ACGIH® TLV® TWA	0.00005 mg/m ³ (inhalable particulate matter)
USA ACGIH	ACGIH chemical category	Confirmed Human Carcinogen, respiratory sensitizer
USA OSHA	OSHA PEL TWA	0.2 µg/m ³
USA OSHA	OSHA PEL STEL	2 µg/m ³ (See 29 CFR 1910.1024)
USA OSHA	OSHA PEL C	2 µg/m ³
USA OSHA	Acceptable Maximum Peak Above The Acceptable Ceiling Concentration For An 8-Hr Shift	25 µg/m ³ Peak (30 minutes)
USA OSHA	OSHA Action Level/Excursion Limit	0.1 µg/m ³ (Action Level, see 29 CFR 1910.1024)
USA NIOSH	NIOSH REL C	0.0005 mg/m ³
USA IDLH	IDLH	4 mg/m ³
Alberta	OEL STEL	0.01 mg/m ³
Alberta	OEL TWA	0.002 mg/m ³
British Columbia	OEL TWA	0.00005 mg/m ³ (inhalable)
Manitoba	OEL TWA	0.00005 mg/m ³ (inhalable particulate matter)
New Brunswick	OEL TWA	0.00005 mg/m ³ (inhalable fraction)
Newfoundland & Labrador	OEL TWA	0.00005 mg/m ³ (inhalable particulate matter)
Nova Scotia	OEL TWA	0.00005 mg/m ³ (inhalable particulate matter)
Nunavut	OEL STEL	0.01 mg/m ³
Nunavut	OEL TWA	0.002 mg/m ³
Northwest Territories	OEL STEL	0.01 mg/m ³
Northwest Territories	OEL TWA	0.002 mg/m ³
Ontario	OEL TWAEV	0.00005 mg/m ³ (inhalable particulate matter)
Prince Edward Island	OEL TWA	0.00005 mg/m ³ (inhalable particulate matter)
Québec	VEMP (OEL TWAEV)	0.00015 mg/m ³
Saskatchewan	OEL STEL	0.01 mg/m ³
Saskatchewan	OEL TWA	0.002 mg/m ³
Yukon	OEL TWA	0.002 mg/m ³
Manganese (7439-96-5)		
USA ACGIH	ACGIH® TLV® TWA	0.02 mg/m ³ (respirable particulate matter) 0.1 mg/m ³ (inhalable particulate matter)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA OSHA	OSHA PEL C	5 mg/m ³ (fume)
USA NIOSH	NIOSH REL TWA	1 mg/m ³ (fume)
USA NIOSH	NIOSH REL STEL	3 mg/m ³
USA IDLH	IDLH	500 mg/m ³
Alberta	OEL TWA	0.2 mg/m ³
British Columbia	OEL TWA	0.02 mg/m ³ (respirable) 0.1 mg/m ³ (inhalable)
Manitoba	OEL TWA	0.02 mg/m ³ (respirable particulate matter) 0.1 mg/m ³ (inhalable particulate matter)
New Brunswick	OEL TWA	0.02 mg/m ³ (respirable fraction) 0.1 mg/m ³ (inhalable fraction)
Newfoundland & Labrador	OEL TWA	0.02 mg/m ³ (respirable particulate matter) 0.1 mg/m ³ (inhalable particulate matter)
Nova Scotia	OEL TWA	0.02 mg/m ³ (respirable particulate matter) 0.1 mg/m ³ (inhalable particulate matter)
Nunavut	OEL STEL	0.6 mg/m ³
Nunavut	OEL TWA	0.2 mg/m ³
Northwest Territories	OEL STEL	0.6 mg/m ³
Northwest Territories	OEL TWA	0.2 mg/m ³
Ontario	OEL TWAEV	0.2 mg/m ³

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Prince Edward Island	OEL TWA	0.02 mg/m ³ (respirable particulate matter) 0.1 mg/m ³ (inhalable particulate matter)
Québec	VEMP (OEL TWA EV)	0.2 mg/m ³ (inhalable dust and fumes, inhalable aerosol fraction) 0.05 mg/m ³ (respirable dust and fumes, respirable aerosol fraction)
Saskatchewan	OEL STEL	0.6 mg/m ³
Saskatchewan	OEL TWA	0.2 mg/m ³
Yukon	OEL C	5 mg/m ³
Copper (7440-50-8)		
USA ACGIH	ACGIH® TLV® TWA	0.2 mg/m ³ (fume)
USA OSHA	OSHA PEL TWA	0.1 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
USA NIOSH	NIOSH REL TWA	1 mg/m ³ (dust and mist) 0.1 mg/m ³ (fume)
USA IDLH	IDLH	100 mg/m ³ (dust, fume and mist)
Alberta	OEL TWA	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
British Columbia	OEL TWA	1 mg/m ³ (dust and mist) 0.2 mg/m ³ (fume)
Manitoba	OEL TWA	0.2 mg/m ³ (fume)
New Brunswick	OEL TWA	0.2 mg/m ³ (fume)
Newfoundland & Labrador	OEL TWA	0.2 mg/m ³ (fume)
Nova Scotia	OEL TWA	0.2 mg/m ³ (fume)
Nunavut	OEL STEL	3 mg/m ³ (dust and mist) 0.6 mg/m ³ (fume)
Nunavut	OEL TWA	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Northwest Territories	OEL STEL	3 mg/m ³ (dust and mist) 0.6 mg/m ³ (fume)
Northwest Territories	OEL TWA	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Ontario	OEL TWA EV	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Prince Edward Island	OEL TWA	0.2 mg/m ³ (fume)
Québec	VEMP (OEL TWA EV)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Saskatchewan	OEL STEL	0.6 mg/m ³ (fume) 3 mg/m ³ (dust and mist)
Saskatchewan	OEL TWA	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Yukon	OEL STEL	0.2 mg/m ³ (fume) 2 mg/m ³ (dust and mist)
Yukon	OEL TWA	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)

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. Maintain sufficient mechanical or natural ventilation to assure silica concentrations remain below PEL/TLV. Use local exhaust if necessary. Power equipment should be equipped with properly designed dust collection devices. If product needs to be altered, use wet processing techniques if possible to minimize generation of dust.

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



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: 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.

Consumer Exposure Controls: Avoid contact during pregnancy/while nursing

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Solid
Color	: Black
Odor	: Odorless
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
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	: No data available
Flammability (solid, gas)	: No data available
Lower Flammable Limit	: No data available
Upper Flammable Limit	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
Density	: 2.8 – 3.8 g/cm ³ (23.37-31.71 lbs/gal)
Specific Gravity	: No data available
Solubility	: Water: Insoluble
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity, Kinematic	: No data available
Particle characteristics	: No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

Hazardous reactions will not occur under normal conditions. Silicates dissolve in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Silicates react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.

10.2. Chemical Stability:

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions, Including those Associated with Foreseeable Emergencies:

Hazardous polymerization will not occur.

10.4. Conditions to Avoid:

Direct sunlight, extremely high or low temperatures, and incompatible materials. Avoid creating or spreading dust.

10.5. Incompatible Materials:

Strong acids, strong bases, strong oxidizers.

10.6. Hazardous Decomposition Products:

Thermal decomposition may produce: Crystalline silica exists in several forms, the most common of which is quartz. If crystalline silica (quartz) is heated to more than 870°C (1598 °F), it can change to a form of crystalline silica known as trydimite, and if crystalline silica (quartz) is heated to more than 1470°C (2678 °F), it can change to a form of crystalline silica known as cristobalite. The OSHA PEL for crystalline silica as trydimite and cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Information on Toxicological Effects - Product**

Likely routes of exposure: Dermal, Eye Contact, Inhalation, Oral.

Acute Toxicity (Oral): Not classified.

Acute Toxicity (Dermal): Not classified.

Acute Toxicity (Inhalation): Not classified.

LD50 and LC50 Data:

No additional information available

Skin Corrosion/Irritation: Causes skin irritation.

Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified.

Germ Cell Mutagenicity: Not classified.

Carcinogenicity: May cause cancer.

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs through prolonged or repeated exposure.

Reproductive Toxicity: May damage fertility or the unborn child. May cause harm to breast-fed children.

Specific Target Organ Toxicity (Single Exposure): Not classified.

Aspiration Hazard: Not classified.

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation. Cough, dyspnea (breathing difficulty), wheezing; decreased pulmonary function, progressive respiratory symptoms (silicosis). The lungs become very inflamed and may fill with fluid, causing severe shortness of breath and low blood oxygen levels. Inflammation, scarring, and symptoms progress faster in accelerated silicosis than in simple silicosis. Progressive massive fibrosis may occur in simple or accelerated silicosis, but is more common in the accelerated form. Progressive massive fibrosis results from severe scarring and leads to the destruction of normal lung structures.

Symptoms/Injuries After Skin Contact: 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: Ingestion may cause adverse effects.

Chronic Symptoms: May cause cancer. Causes damage to organs through prolonged or repeated exposure. May damage fertility or the unborn child. This product contains crystalline silica. Long term exposure to respirable crystalline silica results in a significant risk of developing silicosis; a seriously disabling and fatal lung disease, and other non-malignant respiratory disease, lung cancer, kidney effects, and immune system effects. Pulmonary function may be reduced and pre-existing lung diseases such as emphysema or asthma may be aggravated by inhalation exposure to dusts. Smoking aggravates the effects of exposure. Inhalation may lead to a progressive massive fibrosis which may be accompanied by right heart enlargement, heart failure, pulmonary failure of the lung and susceptibility to pulmonary tuberculosis.

11.2. Information on Toxicological Effects - Ingredient(s)**LD50 and LC50 Data:**

Iron oxide (Fe₂O₃) (1309-37-1)	
LD50 Oral Rat	> 10000 mg/kg (Source: ECHA)
LC50 Inhalation Rat	5.05 mg/l/4h
Aluminum oxide (Al₂O₃) (1344-28-1)	
LD50 Oral Rat	> 15900 mg/kg
Quartz (14808-60-7)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rat	> 5000 mg/kg
Magnesium oxide (MgO) (1309-48-4)	
LD50 Oral Rat	3870 mg/kg (Source: NLM_HSDB)
Calcium oxide (1305-78-8)	
LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rat	> 2500 mg/kg (Source: ECHA)

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LD50 Dermal Rabbit	> 2500 mg/kg
LC50 Inhalation Rat	> 6.04 mg/l/4h
Lead (7439-92-1)	
LD50 Oral Rat	> 5000 mg/kg
LC50 Inhalation Rat	> 5.05 mg/l/4h No observed mortality. No abnormalities detected at necropsy.
Molybdenum (7439-98-7)	
LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
LC50 Inhalation Rat	> 5.1 mg/l/4h
LC50 Inhalation Rat	> 3.92 mg/l/4h
Arsenic (7440-38-2)	
LD50 Oral Rat	15 mg/kg (Source: NZ_CCID)
ATE US/CA (gas)	700.00 ppmV/4h
ATE US/CA (vapors)	3.00 mg/l/4h
ATE US/CA (dust, mist)	0.50 mg/l/4h
Nickel (7440-02-0)	
LD50 Oral Rat	> 9000 mg/kg (Source: EU_RAR)
LC50 Inhalation Rat	> 10.2 mg/l (Exposure time: 1 h Source: EU_RAR)
Cadmium (7440-43-9)	
LD50 Oral Rat	1140 mg/kg (Source: JAPAN_GHS)
LC50 Inhalation Rat	25 mg/m ³ (Exposure time: 30 min Source: NLM_CIP)
ATE US/CA (vapors)	0.03 mg/l/4h
ATE US/CA (dust, mist)	0.03 mg/l/4h
Beryllium (7440-41-7)	
ATE US/CA (oral)	100.00 mg/kg body weight
ATE US/CA (gas)	100.00 ppmV/4h
ATE US/CA (vapors)	0.50 mg/l/4h
ATE US/CA (dust, mist)	0.05 mg/l/4h
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
Copper (7440-50-8)	
LC50 Inhalation Rat	> 5.11 mg/l/4h
Sulfur trioxide (7446-11-9)	
LC50 Inhalation Rat	1375 mg/m ³ (Exposure time: 1 h Source: NLM_HSDB)
ATE US/CA (vapors)	1.38 mg/l/4h
ATE US/CA (dust, mist)	1.38 mg/l/4h
Iron oxide (Fe₂O₃) (1309-37-1)	
IARC Group	3
Quartz (14808-60-7)	
IARC Group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Silica, vitreous (60676-86-0)	
IARC Group	3
Lead (7439-92-1)	
IARC Group	2A
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.

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OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Arsenic (7440-38-2)	
IARC Group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
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.
Cadmium (7440-43-9)	
IARC Group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
OSHA Specifically Regulated Carcinogen List	In OSHA Specifically Regulated Carcinogen list.
Beryllium (7440-41-7)	
IARC Group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
OSHA Specifically Regulated Carcinogen List	In OSHA Specifically Regulated Carcinogen list.
Sulfur trioxide (7446-11-9)	
IARC Group	1
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Arsenic (7440-38-2)	
LOAEL (oral,rat)	5 mg/kg body weight
LOAEL (dermal,rat/rabbit)	300 mg/kg body weight

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

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

Iron oxide (Fe2O3) (1309-37-1)	
LC50 Fish 1	100000 mg/l (Exposure time: 96 h - Species: Danio rerio [static] Source: ECHA)
Aluminum oxide (Al2O3) (1344-28-1)	
LC50 Fish 1	> 100 mg/l
EC50 - Crustacea [1]	> 100 mg/l
ErC50 algae	> 100 mg/l
NOEC (Acute)	> 50 mg/l
Calcium oxide (1305-78-8)	
LC50 Fish 1	50.6 mg/l
Lead (7439-92-1)	
LC50 Fish 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static] Source: EPA)
EC50 - Crustacea [1]	600 µg/l (Exposure time: 48 h - Species: water flea)
LC50 Fish 2	1.17 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through] Source: EPA)
Molybdenum (7439-98-7)	
LC50 Fish 1	800 – 1320 mg/l
Nickel (7440-02-0)	
LC50 Fish 1	100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)
EC50 - Crustacea [1]	100 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	15.3 mg/l
EC50 - Crustacea [2]	1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
Cadmium (7440-43-9)	

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LC50 Fish 1	0.003 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through] Source: EPA)
EC50 - Crustacea [1]	0.0244 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 Fish 2	0.006 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: EPA)
ErC50 algae	0.07 mg/l
NOEC Chronic Fish	0.008 mg/l
Manganese (7439-96-5)	
LC50 Fish 1	> 3.6 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static] Source: ECHA)
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 Source: EPA)
EC50 - Crustacea [1]	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 Fish 2	< 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)

12.2. Persistence and Degradability

Persistence and Degradability	May cause long-term adverse effects in the environment.
Copper (7440-50-8)	
Persistence and Degradability	Not readily biodegradable.

12.3. Bioaccumulative Potential

Bioaccumulative Potential	Not established.
Calcium oxide (1305-78-8)	
BCF Fish 1	(no bioaccumulation)

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

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

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

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.

14.1. In Accordance with DOT

Not regulated for transport

14.2. In Accordance with IMDG

Not regulated for transport

14.3. In Accordance with IATA

Not regulated for transport

14.4. In Accordance with TDG

Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

SARA Section 311/312 Hazard Classes	Health hazard - Carcinogenicity Health hazard - Specific target organ toxicity (single or repeated exposure)
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	Health hazard - Skin corrosion or Irritation Health hazard - Reproductive toxicity Health hazard - Serious eye damage or eye irritation
Iron oxide (Fe₂O₃) (1309-37-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Aluminum oxide (Al₂O₃) (1344-28-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	1 % (fibrous forms)
Quartz (14808-60-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Magnesium oxide (MgO) (1309-48-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Silica, vitreous (60676-86-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Calcium oxide (1305-78-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Sodium oxide (Na₂O) (1313-59-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Lead (7439-92-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	10 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	(not eligible for the de minimis exemption)
Molybdenum (7439-98-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Arsenic (7440-38-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1 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	0.1 %
Nickel (7440-02-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb (only applicable if particles are < 100 µm)
SARA Section 313 - Emission Reporting	0.1 %
Cadmium (7440-43-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	10 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	0.1 %
Beryllium (7440-41-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	

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CERCLA RQ	10 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	0.1 %
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	
SARA Section 313 - Emission Reporting	1 %
Copper (7440-50-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA 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 %
Sulfur trioxide (7446-11-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Listed on the United States SARA Section 302	
SARA Section 302 Threshold Planning Quantity (TPQ)	100 lb (this material is a reactive solid, the TPQ does not default to 10000 pounds for non-powder, non-molten, non-solution form)

15.2. US State Regulations

California Proposition 65



WARNING: This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and 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
Quartz (14808-60-7)	X			
Lead (7439-92-1)	X	X	X	X
Nickel (7440-02-0)	X			
Cadmium (7440-43-9)	X	X		X
Beryllium (7440-41-7)	X			

Iron oxide (Fe2O3) (1309-37-1)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Aluminum oxide (Al2O3) (1344-28-1)
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
Quartz (14808-60-7)
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
Magnesium oxide (MgO) (1309-48-4)
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
Silica, vitreous (60676-86-0)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List

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Calcium oxide (1305-78-8)
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
Lead (7439-92-1)
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
Molybdenum (7439-98-7)
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
Arsenic (7440-38-2)
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
Silica, crystalline, tripoli (1317-95-9)
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
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
Cadmium (7440-43-9)
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 U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
Beryllium (7440-41-7)
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 U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard 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
Copper (7440-50-8)
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
Sulfur trioxide (7446-11-9)

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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
 U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

15.3. Canadian Regulations

Iron oxide (Fe₂O₃) (1309-37-1)

Listed on the Canadian DSL (Domestic Substances List)

Aluminum oxide (Al₂O₃) (1344-28-1)

Listed on the Canadian DSL (Domestic Substances List)

Quartz (14808-60-7)

Listed on the Canadian DSL (Domestic Substances List)

Magnesium oxide (MgO) (1309-48-4)

Listed on the Canadian DSL (Domestic Substances List)

Silica, vitreous (60676-86-0)

Listed on the Canadian DSL (Domestic Substances List)

Calcium oxide (1305-78-8)

Listed on the Canadian DSL (Domestic Substances List)

Sodium oxide (Na₂O) (1313-59-3)

Listed on the Canadian DSL (Domestic Substances List)

Lead (7439-92-1)

Listed on the Canadian DSL (Domestic Substances List)

Molybdenum (7439-98-7)

Listed on the Canadian DSL (Domestic Substances List)

Arsenic (7440-38-2)

Listed on the Canadian DSL (Domestic Substances List)

Nickel (7440-02-0)

Listed on the Canadian DSL (Domestic Substances List)

Cadmium (7440-43-9)

Listed on the Canadian DSL (Domestic Substances List)

Beryllium (7440-41-7)

Listed on the Canadian DSL (Domestic Substances List)

Manganese (7439-96-5)

Listed on the Canadian DSL (Domestic Substances List)

Copper (7440-50-8)

Listed on the Canadian DSL (Domestic Substances List)

Sulfur trioxide (7446-11-9)

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 : 06/17/2025

Revision

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/2022-272.

GHS Full Text Phrases:	
H250	Catches fire spontaneously if exposed to air
H290	May be corrosive to metals
H300	Fatal if swallowed
H301	Toxic if swallowed

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H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H330	Fatal if inhaled
H331	Toxic if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child
H361	Suspected of damaging fertility or the unborn child
H362	May cause harm to breast-fed children
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
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Glossary of Data Source Abbreviations

ATSDR: Agency for Toxic Substances and Disease Registry (U.S. Department of Health and Human Services)

AU_WES: Australia WES

CHEMVIEW: ChemView (U.S. Environmental Protection Agency)

EC_RAR: European Commission Renewal Assessment Report

EC_SCOEL: European Commission Scientific Committee on Occupational Exposure Limits

ECETOC: European Centre for Ecotoxicology and Toxicology of Chemicals Reports

ECHA_API: European Chemicals Agency API

ECHA_RAC: ECHA Committee for Risk Assessment

EFSA: European Food Safety Authority

EPA: U.S. Environmental Protection Agency

EPA_AEGL: Acute Exposure Guideline Levels (U.S. Environmental Protection Agency)

EPA_FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act Reregistration Eligibility Decision (U.S. Environmental Protection Agency)

EPA_HPVC: High Production Volume Chemicals (U.S. Environmental Protection Agency)

EPA_TRED: Risk Assessment for Tolerance Reassessment Eligibility Decision (U.S. Environmental Protection Agency)

EU_CLH: European Union Harmonised Classification and Labelling Proposal

EU_RAR: European Union Risk Assessment Report

FOOD_JOURN: Food Research Journal (1956)

IARC: The International Agency for Research on Cancer

IDLH: National Institute for Occupational Health and Safety Immediately Dangerous to Life or Health Value Profiles

IUCLID: International Uniform Chemical Information Database

JAPAN_GHS: Japan GHS Basis for Classification Data

JP_J-CHECK: Japan J-Check

KR_NIER: South Korea National Institute of Environmental Research Evaluations

NICNAS: Australia National Industrial Chemicals Notification and Assessment Scheme

NIOSH: National Institute for Occupational Health and Safety (U.S. Department of Health and Human Services)

NLM_CIP: National Library of Medicine ChemID plus database

NLM_HSDB: National Library of Medicine Hazardous Substance Data Bank

NLM_PUBMED: National Library of Medicine PubMed database

NTP: National Toxicology Program

NZ_CCID: New Zealand Chemical Classification and Information Database

OECD_EHSP: Environment, Health, and Safety Publication (Organisation for Economic Co-operation and Development)

OECD_SIDS: Screening Information Data Sets (Organisation for Economic Co-operation and Development)

WHO: World Health Organization

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.