



SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	Lava Rock Natural Cinders
Other means of identification	Not available
Recommended use	Decorative rock, Biofilter
Recommended restrictions	None known.
Manufacturer information	Red Hill Lava Products, Inc. PO BOX 925 Milan, IL 61264 Fax: 309-787-2734 Phone: 309-756-2192
Supplier	See above.

2. Hazards Identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
WHMIS 2015 defined hazards	Not classified
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	Not applicable.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Aluminum		7429-90-5	<0.1
Antimony		7440-36-0	<0.1
Arsenic		7440-38-2	<0.1
Barium		7440-39-3	<0.1
Beryllium		7440-41-7	<0.1
Boron		7440-42-8	<0.1
Cadmium		7440-43-9	<0.1
Chloride		16887-00-6	<0.1
Chromium		7440-47-3	<0.1
Copper		7440-50-8	<0.1
Iron		7439-89-6	<0.1

Chemical name	Common name and synonyms	CAS number	%
Lead		7439-92-1	<0.1
Manganese		7439-96-5	<0.1
Mercury		7439-97-6	<0.1
Molybdenum		7439-98-7	<0.1
Nickel		7440-02-0	<0.1
Nitrogen		7727-37-9	<0.1
Selenium		7782-49-2	<0.1
Silver		7440-22-4	<0.1
Sulfate		14808-79-8	<0.1
Thallium		7440-28-0	<0.1
Zinc, elemental		7440-66-6	<0.1

Composition comments	This product is considered non hazardous by WHMIS/OSHA criteria. ** Contains trace amounts of aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chloride, chromium, copper, iron, lead, manganese, mercury, molybdenum, nickel, nitrogen, selenium, silver, sulfate, thallium, zinc.
-----------------------------	--

4. First Aid Measures

Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	If you feel unwell, seek immediate medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Material will not burn.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Not available.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Not available.
Specific methods	Not available.
General fire hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	May include and are not limited to: Oxides of nitrogen. Oxides of carbon.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Before attempting clean up, refer to hazard data given above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. For waste disposal, see section 13 of the SDS.
Environmental precautions	No special environmental precautions required.

7. Handling and Storage

Precautions for safe handling	Avoid breathing dust. Avoid contact with eyes, skin and clothing. Avoid prolonged exposure. Use with adequate ventilation. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

8. Exposure Controls/Personal Protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	5 mg/m3 10 mg/m3	Pyrophoric powder. Dust.
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Arsenic (CAS 7440-38-2)	TWA	0.01 mg/m3	
Barium (CAS 7440-39-3)	TWA	0.5 mg/m3	
Beryllium (CAS 7440-41-7)	STEL	1.1 mg/m3	
	TWA	1.2 mg/m3	
Cadmium (CAS 7440-43-9)	TWA	0.01 mg/m3	
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m3	
Copper (CAS 7440-50-8)	TWA	1 mg/m3 0.2 mg/m3	Dust and mist. Fume.
Lead (CAS 7439-92-1)	TWA	0.05 mg/m3	
Manganese (CAS 7439-96-5)	TWA	0.2 mg/m3	
Nickel (CAS 7440-02-0)	TWA	1.5 mg/m3	
Selenium (CAS 7782-49-2)	TWA	0.2 mg/m3	
Silver (CAS 7440-22-4)	TWA	0.1 mg/m3	
Thallium (CAS 7440-28-0)	TWA	0.1 mg/m3	

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m3	Respirable.
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Arsenic (CAS 7440-38-2)	TWA	0.01 mg/m3	
Barium (CAS 7440-39-3)	TWA	0.5 mg/m3	
Beryllium (CAS 7440-41-7)	STEL	1.1 mg/m3	
	TWA	1.2 mg/m3	
Cadmium (CAS 7440-43-9)	TWA	1.1 mg/m3 1.2 mg/m3	Respirable.
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m3	
Copper (CAS 7440-50-8)	TWA	1 mg/m3 0.2 mg/m3	Dust and mist. Fume.
Lead (CAS 7439-92-1)	TWA	0.05 mg/m3	
Manganese (CAS 7439-96-5)	TWA	0.2 mg/m3	
Mercury (CAS 7439-97-6)	TWA	0.025 mg/m3	
Molybdenum (CAS 7439-98-7)	TWA	3 mg/m3 10 mg/m3	Respirable. Inhalable
Nickel (CAS 7440-02-0)	TWA	0.05 mg/m3	
Selenium (CAS 7782-49-2)	TWA	0.1 mg/m3	
Silver (CAS 7440-22-4)	STEL	0.03 mg/m3	
	TWA	1.1 mg/m3	
Thallium (CAS 7440-28-0)	TWA	1.2 mg/m3	Inhalable

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Arsenic (CAS 7440-38-2)	TWA	0.01 mg/m3	
Barium (CAS 7440-39-3)	TWA	0.5 mg/m3	
Beryllium (CAS 7440-41-7)	TWA	0.00005 mg/m3	Inhalable fraction.
Cadmium (CAS 7440-43-9)	TWA	1.1 mg/m3 1.2 mg/m3	Respirable fraction.
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m3	
Copper (CAS 7440-50-8)	TWA	1 mg/m3 0.2 mg/m3	Dust and mist. Fume.
Lead (CAS 7439-92-1)	TWA	0.05 mg/m3	
Manganese (CAS 7439-96-5)	TWA	0.1 mg/m3 0.02 mg/m3	Inhalable fraction. Respirable fraction.
Mercury (CAS 7439-97-6)	TWA	0.025 mg/m3	
Molybdenum (CAS 7439-98-7)	TWA	3 mg/m3 10 mg/m3	Respirable fraction. Inhalable fraction.
Nickel (CAS 7440-02-0)	TWA	1.5 mg/m3	Inhalable fraction.
Selenium (CAS 7782-49-2)	TWA	0.2 mg/m3	
Silver (CAS 7440-22-4)	TWA	1.1 mg/m3	Dust and fume.
Thallium (CAS 7440-28-0)	TWA	1.2 mg/m3	Inhalable fraction.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Arsenic (CAS 7440-38-2)	STEL TWA	0.05 mg/m3 0.01 mg/m3	
Barium (CAS 7440-39-3)	TWA	0.5 mg/m3	
Beryllium (CAS 7440-41-7)	STEL TWA	1.1 mg/m3 1.2 mg/m3	
Cadmium (CAS 7440-43-9)	TWA	1.1 mg/m3 1.2 mg/m3	Respirable fraction.
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m3	
Copper (CAS 7440-50-8)	TWA	1 mg/m3 0.2 mg/m3	Dust and fume. Fume.
Lead (CAS 7439-92-1)	TWA	0.05 mg/m3	
Manganese (CAS 7439-96-5)	TWA	0.2 mg/m3	
Mercury (CAS 7439-97-6)	TWA	0.025 mg/m3	
Molybdenum (CAS 7439-98-7)	TWA	3 mg/m3 10 mg/m3	Respirable fraction. Inhalable fraction.
Nickel (CAS 7440-02-0)	TWA	1 mg/m3	Inhalable fraction.
Selenium (CAS 7782-49-2)	TWA	0.2 mg/m3	
Silver (CAS 7440-22-4)	TWA	1.1 mg/m3	Dust and fume.
Thallium (CAS 7440-28-0)	TWA	1.2 mg/m3	Inhalable fraction.

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	5 mg/m3 10 mg/m3	Welding fume.
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Arsenic (CAS 7440-38-2)	TWA	0.1 mg/m3	
Beryllium (CAS 7440-41-7)	TWA	0.00015 mg/m3	
Cadmium (CAS 7440-43-9)	TWA	0.025 mg/m3	
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m3	
Copper (CAS 7440-50-8)	TWA	1 mg/m3 0.2 mg/m3	Dust and mist. Fume.
Lead (CAS 7439-92-1)	TWA	0.05 mg/m3	
Manganese (CAS 7439-96-5)	STEL	3 mg/m3	Fume.
	TWA	5 mg/m3 1 mg/m3	Dust. Fume.
Mercury (CAS 7439-97-6)	TWA	0.025 mg/m3	Vapor.
Molybdenum (CAS 7439-98-7)	TWA	10 mg/m3	
Nickel (CAS 7440-02-0)	TWA	1 mg/m3	
Selenium (CAS 7782-49-2)	TWA	0.2 mg/m3	
Silver (CAS 7440-22-4)	TWA	0.1 mg/m3	
Thallium (CAS 7440-28-0)	TWA	0.1 mg/m3	

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Arsenic (CAS 7440-38-2)	TWA	1.1 mg/m3
Beryllium (CAS 7440-41-7)	STEL	1.2 ppm
	TWA	0.0002 mg/m3
Cadmium (CAS 7440-43-9)	TWA	0.005 mg/m3
Lead (CAS 7439-92-1)	TWA	0.05 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	PEL	5 mg/m3 15 mg/m3	Respirable fraction. Total dust.
Antimony (CAS 7440-36-0)	PEL	0.5 mg/m3	
Barium (CAS 7440-39-3)	PEL	0.5 mg/m3	
Chromium (CAS 7440-47-3)	PEL	1 mg/m3	
Copper (CAS 7440-50-8)	PEL	1 mg/m3 0.1 mg/m3	Dust and mist. Fume.
Manganese (CAS 7439-96-5)	Ceiling	5 mg/m3	Fume.
Molybdenum (CAS 7439-98-7)	PEL	15 mg/m3	Total dust.
Nickel (CAS 7440-02-0)	PEL	1 mg/m3	
Selenium (CAS 7782-49-2)	PEL	0.2 mg/m3	
Silver (CAS 7440-22-4)	PEL	0.01 mg/m3	

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value	Form
Beryllium (CAS 7440-41-7)	Ceiling	0.005 mg/m3	
	TWA	0.002 mg/m3	
Cadmium (CAS 7440-43-9)	Ceiling	0.6 mg/m3 0.3 mg/m3	Dust. Fume.
	TWA	0.2 mg/m3 0.1 mg/m3	Dust. Fume.
Mercury (CAS 7439-97-6)	Ceiling	0.1 mg/m3	

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	5 mg/m3	Respirable fraction.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Arsenic (CAS 7440-38-2)	TWA	0.01 mg/m3	
Barium (CAS 7440-39-3)	TWA	0.5 mg/m3	
Beryllium (CAS 7440-41-7)	TWA	0.00005 mg/m3	Inhalable fraction.
Cadmium (CAS 7440-43-9)	TWA	1.1 mg/m3	
		1.2 mg/m3	Respirable fraction.
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m3	
Copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Lead (CAS 7439-92-1)	TWA	0.05 mg/m3	
Manganese (CAS 7439-96-5)	TWA	0.1 mg/m3	Inhalable fraction.
		0.02 mg/m3	Respirable fraction.
Mercury (CAS 7439-97-6)	TWA	0.025 mg/m3	
Molybdenum (CAS 7439-98-7)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.
Nickel (CAS 7440-02-0)	TWA	1.5 mg/m3	Inhalable fraction.
Selenium (CAS 7782-49-2)	TWA	0.2 mg/m3	
Silver (CAS 7440-22-4)	TWA	1.1 mg/m3	Dust and fume.
Thallium (CAS 7440-28-0)	TWA	1.2 mg/m3	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	5 mg/m3	Welding fume or pyrophoric powder.
		5 mg/m3	Respirable.
		10 mg/m3	Total
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Arsenic (CAS 7440-38-2)	Ceiling	0.002 mg/m3	
Beryllium (CAS 7440-41-7)	Ceiling	0.0005 mg/m3	
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m3	
Copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
		0.1 mg/m3	Fume.
Lead (CAS 7439-92-1)	TWA	0.05 mg/m3	
Manganese (CAS 7439-96-5)	STEL	3 mg/m3	Fume.
	TWA	1 mg/m3	Fume.
Mercury (CAS 7439-97-6)	TWA	0.05 mg/m3	Vapor.
Nickel (CAS 7440-02-0)	TWA	0.015 mg/m3	
Selenium (CAS 7782-49-2)	TWA	0.2 mg/m3	
Silver (CAS 7440-22-4)	TWA	0.01 mg/m3	Dust.
Thallium (CAS 7440-28-0)	TWA	0.1 mg/m3	

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Arsenic (CAS 7440-38-2)	35 µg/l	Inorganic arsenic, plus methylated metabolites, as As	Urine	*
Cadmium (CAS 7440-43-9)	5 µg/g	Cadmium	Creatinine in urine	*
	5 µg/l	Cadmium	Blood	*
Lead (CAS 7439-92-1)	200 µg/l	Lead	Blood	*
Mercury (CAS 7439-97-6)	20 µg/g	Total inorganic mercury	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines

Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH or OSHA PEL.

Canada - Alberta OELs: Skin designation

Thallium (CAS 7440-28-0)

Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

Beryllium (CAS 7440-41-7)

Can be absorbed through the skin.

Mercury (CAS 7439-97-6)

Can be absorbed through the skin.

Thallium (CAS 7440-28-0)

Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

Mercury (CAS 7439-97-6)

Can be absorbed through the skin.

Thallium (CAS 7440-28-0)

Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation

Mercury (CAS 7439-97-6)

Can be absorbed through the skin.

Thallium (CAS 7440-28-0)

Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation

Mercury (CAS 7439-97-6)

Can be absorbed through the skin.

Thallium (CAS 7440-28-0)

Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

Mercury (CAS 7439-97-6)

Can be absorbed through the skin.

Thallium (CAS 7440-28-0)

Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Mercury (CAS 7439-97-6)

Can be absorbed through the skin.

Thallium (CAS 7440-28-0)

Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

Arsenic (CAS 7440-38-2)

Can be absorbed through the skin.

Mercury (CAS 7439-97-6)

Can be absorbed through the skin.

Thallium (CAS 7440-28-0)

Can be absorbed through the skin.

Appropriate engineering controls

Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Safety goggles or glasses.

Skin protection**Hand protection**

Impervious gloves. Confirm with reputable supplier first.

Other

Wear suitable protective clothing.

Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

Thermal hazards

Not applicable.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using do not eat or drink.

9. Physical and Chemical Properties

Appearance	Porous lava
Physical state	Solid.
Form	granular Solid.
Color	grey / Black to Red

Odor	None
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	Do not mix with incompatible materials.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Contact with incompatible materials. In dust form, this product is explosive in presence of open flames, sparks and static discharge.
Incompatible materials	None known.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

11. Toxicological Information

Routes of exposure	Inhalation. Eye, Skin contact, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	May cause stomach distress, nausea or vomiting.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.
Information on toxicological effects	
Acute toxicity	

Components	Species	Test Results
Aluminum (CAS 7429-90-5)		
Acute		
Dermal		
LD50	Not available	

Components	Species	Test Results
<i>Inhalation</i> LC50	Rat	> 1000 mg/m3, 4 Hours, CCOHS > 2.3 mg/L, 4 Hours, ECHA > 0.9 mg/L, 4 Hours, ECHA 7.6 mg/L, 1 Hours, ECHA
<i>Oral</i> LD50	Rat	> 15900 mg/kg, ECHA > 10000 mg/kg, ECHA > 2000 mg/kg, ECHA
Antimony (CAS 7440-36-0)		
Acute		
<i>Dermal</i> LD50	Not available Rabbit	> 8300 mg/kg, ECHA > 8300 mg/kg, 168 Hours
<i>Inhalation</i> LC50	Rat	> 5.2 mg/L, 4 Hours
<i>Oral</i> LD50	Rat	7000 mg/kg, CCOHS
Arsenic (CAS 7440-38-2)		
Acute		
<i>Inhalation</i> LC50	Not available	
<i>Oral</i> LD50	Mouse Rat	145 mg/kg 763 mg/kg
Barium (CAS 7440-39-3)		
Acute		
<i>Dermal</i> LD50	Not available	
<i>Inhalation</i> LC50	Not available	
<i>Oral</i> LD50	Rat	132 mg/kg, Santa Cruz Biotechnology, Inc.
Beryllium (CAS 7440-41-7)		
Acute		
<i>Dermal</i> LD50	Not available	
<i>Inhalation</i> LC50	Not available	
<i>Oral</i> LD50	Not available Rat	> 2000 mg/kg
Boron (CAS 7440-42-8)		
Acute		
<i>Inhalation</i> LC50	Not available Rat	> 5.1 mg/L, 4 Hours
<i>Oral</i> LD50	Rat	> 2000 mg/kg 350 mg/kg

Components	Species	Test Results
Cadmium (CAS 7440-43-9)		
Acute		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Mouse	> 9 mg/m3, 15 Minutes, ECHA
	Mouse, Rat	> 1 mg/m3, 3 Hours, ECHA
	Rabbit	> 22.4 mg/m3, 15 Minutes, ECHA
		> 4.5 mg/m3, 2 Hours, ECHA
	Rat	> 132 mg/m3, 2 Hours, ECHA
		> 8.6 mg/m3, 30 Minutes, ECHA
		> 8.4 mg/m3, 3 Hours, ECHA
		> 4.6 mg/m3, 3 Hours, ECHA
		> 4.5 mg/m3, 2 Hours, ECHA
		112 mg/m3, 2 Hours, ECHA
<i>Oral</i>		
LD50	Mouse	890 mg/kg, ECHA
		63 mg/kg, ECHA
	Rat	63 - 259 mg/kg, ECHA
Chloride (CAS 16887-00-6)		
Acute		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Not available	
Chromium (CAS 7440-47-3)		
Acute		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Rat	> 5.4 mg/L, 4 Hours
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
Copper (CAS 7440-50-8)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg, ECHA
		> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 5.1 mg/l/4h, ECHA
		> 5.1 mg/L, 4 Hours
<i>Oral</i>		
LD50	Rat	> 2500 mg/kg
		482 mg/kg, ECHA, female rat
		481 mg/kg, ECHA, male rat
Iron (CAS 7439-89-6)		
Acute		
<i>Dermal</i>		
LD50	Not available	

Components	Species	Test Results
<i>Inhalation</i>		
LC50	Guinea pig; Hamster, Syrian; Mouse; Rat	> 100 mg/m3, 6 Hours, ECHA
	Rat	> 250 mg/m3, 6 Hours, ECHA
		> 100 mg/m3, 6 Hours, ECHA
LD50	Rat	> 5 mg/kg, ECHA
<i>Oral</i>		
LD50	Rat	98.6 g/kg, ECHA
Lead (CAS 7439-92-1)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Not available	
	Rat	> 5.1 mg/L, 4 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	> 2000 mg/kg
Manganese (CAS 7439-96-5)		
Acute		
<i>Inhalation</i>		
LC50	Not available	
	Rat	> 5.1 mg/L, 4 Hours
<i>Oral</i>		
LD50	Mouse	1715 mg/kg
	Rat	> 2000 mg/kg
		9000 mg/kg
Mercury (CAS 7439-97-6)		
Acute		
<i>Inhalation</i>		
LC50	Rat	> 26.6 mg/m3
		2.3 ppm, 4 hr
<i>Oral</i>		
LD50	Not available	
	Rat	26 mg/kg
Molybdenum (CAS 7439-98-7)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg, ECHA
		> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 5.1 mg/l/4h, ECHA
		> 1.9 mg/L, 4 Hours
<i>Oral</i>		
LD50	Rat	3884 mg/kg
		3883 mg/kg, ECHA
Nickel (CAS 7440-02-0)		
Acute		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Rat	2550 mg/m3, 4 h, CCOHS

Components	Species	Test Results
<i>Oral</i> LD50	Rat	> 9000 mg/kg, ECHA
Nitrogen (CAS 7727-37-9)		
Acute		
<i>Dermal</i> LD50	Not available	
<i>Inhalation</i> LC50	Not available	
<i>Oral</i> LD50	Not available	
Selenium (CAS 7782-49-2)		
Acute		
<i>Dermal</i> LD50	Not available	
<i>Inhalation</i> LC50	Not available	
<i>Oral</i> LD50	Not available	
Silver (CAS 7440-22-4)		
Acute		
<i>Dermal</i> LD50	Guinea pig	> 348 mg/kg, 24 Hours
	Rat	> 2000 mg/kg > 2000 mg/kg, 24 Hours
<i>Inhalation</i> LC50	Rat	> 5.2 mg/L, 4 Hours 750 µg/m3, 4 Hours
<i>Oral</i> LD50	Mouse	> 5000 mg/kg
	Rat	> 5000 mg/kg 3702 mg/kg 2000 mg/kg
Sulfate (CAS 14808-79-8)		
Acute		
<i>Dermal</i> LD50	Not available	
<i>Inhalation</i> LC50	Not available	
Thallium (CAS 7440-28-0)		
Acute		
<i>Dermal</i> LD50	Not available	
<i>Inhalation</i> LC50	Not available	
<i>Oral</i> LD50	Not available	
Zinc, elemental (CAS 7440-66-6)		
Acute		
<i>Inhalation</i> LC50	Not available	
	Rat	> 5410 mg/m3, 4 Hours

Components	Species	Test Results
<i>Oral</i> LD50	Rat	> 2000 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Exposure minutes	Not available.	
Erythema value	Not available.	
Oedema value	Not available.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Corneal opacity value	Not available.	
Iris lesion value	Not available.	
Conjunctival reddening value	Not available.	
Conjunctival oedema value	Not available.	
Recover days	Not available.	
Respiratory or skin sensitization		
ACGIH sensitization		
Beryllium (CAS 7440-41-7)	Respiratory sensitization	
Canada - Alberta OELs: Irritant		
Aluminum (CAS 7429-90-5)	Irritant	
Antimony (CAS 7440-36-0)	Irritant	
Chromium (CAS 7440-47-3)	Irritant	
Selenium (CAS 7782-49-2)	Irritant	
Canada - British Columbia OELs: Respiratory or skin sensitizer		
Beryllium (CAS 7440-41-7)	Capable of causing respiratory, dermal or conjunctival sensitization.	
Canada - Manitoba OELs Hazard: Respiratory sensitization		
Beryllium (CAS 7440-41-7)	Respiratory sensitization	
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Mutagenicity	Not classified.	
Carcinogenicity	See below.	
ACGIH Carcinogens		
Arsenic (CAS 7440-38-2)	A1 Confirmed human carcinogen.	
Beryllium (CAS 7440-41-7)	A1 Confirmed human carcinogen.	
Cadmium (CAS 7440-43-9)	A2 Suspected human carcinogen.	
Lead (CAS 7439-92-1)	A3 Confirmed animal carcinogen with unknown relevance to humans.	
Canada - Alberta OELs: Carcinogen category		
Arsenic (CAS 7440-38-2)	Confirmed human carcinogen.	
Beryllium (CAS 7440-41-7)	Confirmed human carcinogen.	
Cadmium (CAS 7440-43-9)	Suspected human carcinogen.	
Canada - Manitoba OELs: carcinogenicity		
Arsenic and inorganic compounds, as As (CAS 7440-38-2)	Confirmed human carcinogen.	
BERYLLIUM AND COMPOUNDS, SOLUBLE AND INSOLUBLE COMPOUNDS, AS BE, INHALABLE FRACTION (CAS 7440-41-7)	Confirmed human carcinogen.	
CADMIUM AND COMPOUNDS, AS CD, RESPIRABLE FRACTION (CAS 7440-43-9)	Suspected human carcinogen.	
LEAD AND INORGANIC COMPOUNDS, AS PB (CAS 7439-92-1)	Confirmed animal carcinogen with unknown relevance to humans.	
Canada - Quebec OELs: Carcinogen category		
Beryllium (CAS 7440-41-7)	Detected carcinogenic effect in humans.	
Cadmium (CAS 7440-43-9)	Suspected carcinogenic effect in humans.	
Lead (CAS 7439-92-1)	Detected carcinogenic effect in animals.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Arsenic (CAS 7440-38-2)	Volume 23, Supplement 7, Volume 100C 1 Carcinogenic to humans.	
Beryllium (CAS 7440-41-7)	Volume 58, Volume 100C 1 Carcinogenic to humans.	
Cadmium (CAS 7440-43-9)	Volume 58, Volume 100C 1 Carcinogenic to humans.	
Chromium (CAS 7440-47-3)	Volume 49 - 3 Not classifiable as to carcinogenicity to humans.	

Lead (CAS 7439-92-1)
 Mercury (CAS 7439-97-6)
 Nickel (CAS 7440-02-0)
 Selenium (CAS 7782-49-2)

Volume 23, Supplement 7 - 2B Possibly carcinogenic to humans.
 Volume 58 - 3 Not classifiable as to carcinogenicity to humans.
 Volume 49 - 2B Possibly carcinogenic to humans.
 Volume 9, Supplement 7 - 3 Not classifiable as to carcinogenicity to humans.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Arsenic (CAS 7440-38-2)
 Beryllium (CAS 7440-41-7)
 Cadmium (CAS 7440-43-9)
 Lead (CAS 7439-92-1)
 Nickel (CAS 7440-02-0)

US NTP Report on Carcinogens: Anticipated carcinogen

Lead (CAS 7439-92-1)
 Nickel (CAS 7440-02-0)

Reasonably Anticipated to be a Human Carcinogen.
 Reasonably Anticipated to be a Human Carcinogen.

US NTP Report on Carcinogens: Known carcinogen

Arsenic (CAS 7440-38-2)
 Beryllium (CAS 7440-41-7)
 Cadmium (CAS 7440-43-9)

Known To Be Human Carcinogen.
 Known To Be Human Carcinogen.
 Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic (CAS 7440-38-2)
 Beryllium (CAS 7440-41-7)
 Cadmium (CAS 7440-43-9)

Cancer
 Cancer
 Cancer

Reproductive toxicity	Not classified.
Teratogenicity	Not classified.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity See below

Ecotoxicological data

Components		Species	Test Results
Aluminum (CAS 7429-90-5)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.16 mg/L, 96 hours
Antimony (CAS 7440-36-0)			
Aquatic			
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	6.2 - 8.3 mg/L, 96 hours
Arsenic (CAS 7440-38-2)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	9.9 mg/L, 96 hours
Barium (CAS 7440-39-3)			
Aquatic			
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	> 500 mg/L, 96 hours
Cadmium (CAS 7440-43-9)			
Crustacea	EC50	Daphnia	0.024 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.025 mg/L, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.002 - 0.003 mg/L, 96 hours
Chromium (CAS 7440-47-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.01 - 0.7 mg/L, 48 hours

Components		Species	Test Results
Fish	LC50	Carp (<i>Cyprinus carpio</i>)	14.3 mg/L, 96 hours
Copper (CAS 7440-50-8)			
Algae	IC50	Algae	0.048 mg/L, 72 Hours
Crustacea	EC50	Daphnia	0.03 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	0.036 mg/L, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	0.032 - 0.054 mg/L, 96 hours
Iron (CAS 7439-89-6)			
Aquatic			
Fish	LC50	Channel catfish (<i>Ictalurus punctatus</i>)	> 500 mg/L, 96 hours
Lead (CAS 7439-92-1)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (<i>Oncorhynchus mykiss</i>)	1.17 mg/L, 96 hours
Manganese (CAS 7439-96-5)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	40 mg/L, 48 hours
Mercury (CAS 7439-97-6)			
Aquatic			
Fish	LC50	Indian catfish (<i>Heteropneustes fossilis</i>)	0.099 mg/L, 96 hours 0.099 mg/L, 96 hours
Molybdenum (CAS 7439-98-7)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (<i>Oncorhynchus mykiss</i>)	800 mg/L, 96 hours
Nickel (CAS 7440-02-0)			
Algae	IC50	Algae	0.18 mg/L, 72 Hours
Crustacea	EC50	Daphnia	100 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	1 mg/L, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	2.923 mg/L, 96 hours
Selenium (CAS 7782-49-2)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (<i>Oncorhynchus mykiss</i>)	11.5 mg/L, 96 hours
Silver (CAS 7440-22-4)			
Crustacea	EC50	Daphnia	0 mg/L, 48 Hours
Aquatic			
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	0.002 - 0.003 mg/L, 96 hours
Thallium (CAS 7440-28-0)			
Aquatic			
Fish	LC50	Sheepshead minnow (<i>Cyprinodon variegatus</i>)	17 - 27 mg/L, 96 hours
Zinc, elemental (CAS 7440-66-6)			
Algae	IC50	Algae	0.191 mg/L, 72 Hours
Crustacea	EC50	Daphnia	0.524 mg/L, 48 Hours
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (<i>Oncorhynchus mykiss</i>)	0.56 mg/L, 96 hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Mobility in soil	No data available.		

Mobility in general	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions	Review federal, provincial, and local government requirements prior to disposal.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
US RCRA Hazardous Waste P List: Reference	
Beryllium (CAS 7440-41-7)	P015
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification	Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.
U.S. Department of Transportation (DOT)	
Not regulated as dangerous goods.	
Transportation of Dangerous Goods (TDG - Canada)	
Not regulated as dangerous goods.	

15. Regulatory Information

Canadian federal regulations	This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.	
Canada CEPA Schedule I: Listed substance		
Aluminum (CAS 7429-90-5)		Listed.
Arsenic (CAS 7440-38-2)		Listed.
Cadmium (CAS 7440-43-9)		Listed.
Lead (CAS 7439-92-1)		Listed.
Mercury (CAS 7439-97-6)		Listed.
Zinc, elemental (CAS 7440-66-6)		Listed.
Canada Priority Substances List (Second List): Listed substance		
Aluminum (CAS 7429-90-5)		Listed.
Zinc, elemental (CAS 7440-66-6)		Listed.
Export Control List (CEPA 1999, Schedule 3)		
Mercury (CAS 7439-97-6)		Substance subject to notification or consent.
Greenhouse Gases		
Not listed.		
Precursor Control Regulations		
Not regulated.		
WHMIS 2015 Exemptions	Not applicable	
US federal regulations	This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.	
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)		
Mercury (CAS 7439-97-6)		1.0 % One-Time Export Notification only.
CERCLA Hazardous Substance List (40 CFR 302.4)		
Antimony (CAS 7440-36-0)		Listed.
Arsenic (CAS 7440-38-2)		Listed.
Barium (CAS 7440-39-3)		Listed.
Beryllium (CAS 7440-41-7)		Listed.
Cadmium (CAS 7440-43-9)		Listed.
Chromium (CAS 7440-47-3)		Listed.
Copper (CAS 7440-50-8)		Listed.
Lead (CAS 7439-92-1)		Listed.
Mercury (CAS 7439-97-6)		Listed.
Nickel (CAS 7440-02-0)		Listed.
Selenium (CAS 7782-49-2)		Listed.
Silver (CAS 7440-22-4)		Listed.
Thallium (CAS 7440-28-0)		Listed.

Zinc, elemental (CAS 7440-66-6)

Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic (CAS 7440-38-2)

Cancer

Beryllium (CAS 7440-41-7)

Cancer

Cadmium (CAS 7440-43-9)

Cancer

Lead (CAS 7439-92-1)

Reproductive toxicity

Arsenic (CAS 7440-38-2)

Liver

Beryllium (CAS 7440-41-7)

lung effects (CBD and acute beryllium disease)

Cadmium (CAS 7440-43-9)

Lung

Lead (CAS 7439-92-1)

Central nervous system

Arsenic (CAS 7440-38-2)

Skin

Beryllium (CAS 7440-41-7)

beryllium sensitization

Cadmium (CAS 7440-43-9)

Kidney

Lead (CAS 7439-92-1)

Kidney

Arsenic (CAS 7440-38-2)

Respiratory irritation

Beryllium (CAS 7440-41-7)

Skin sensitization

Cadmium (CAS 7440-43-9)

Acute toxicity

Lead (CAS 7439-92-1)

Blood

Arsenic (CAS 7440-38-2)

Nervous system

Beryllium (CAS 7440-41-7)

skin, eye, and respiratory tract irritation

Lead (CAS 7439-92-1)

Acute toxicity

Arsenic (CAS 7440-38-2)

Acute toxicity

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Extremely hazardous substance

No

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Antimony (CAS 7440-36-0)

Arsenic (CAS 7440-38-2)

Beryllium (CAS 7440-41-7)

Cadmium (CAS 7440-43-9)

Chromium (CAS 7440-47-3)

Lead (CAS 7439-92-1)

Manganese (CAS 7439-96-5)

Mercury (CAS 7439-97-6)

Nickel (CAS 7440-02-0)

Selenium (CAS 7782-49-2)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

US state regulations

US - California Hazardous Substances (Director's): Listed substance

Aluminum (CAS 7429-90-5)

Listed.

Antimony (CAS 7440-36-0)

Listed.

Arsenic (CAS 7440-38-2)

Listed.

Beryllium (CAS 7440-41-7)

Listed.

Cadmium (CAS 7440-43-9)

Listed.

Chromium (CAS 7440-47-3)

Listed.

Copper (CAS 7440-50-8)

Listed.

Iron (CAS 7439-89-6)

Listed.

Lead (CAS 7439-92-1)

Listed.

Manganese (CAS 7439-96-5)

Listed.

Mercury (CAS 7439-97-6)

Listed.

Molybdenum (CAS 7439-98-7)

Listed.

Nickel (CAS 7440-02-0)

Listed.

Selenium (CAS 7782-49-2)

Listed.

Silver (CAS 7440-22-4)

Listed.

Thallium (CAS 7440-28-0)

Listed.

Zinc, elemental (CAS 7440-66-6)

Listed.

US - Illinois Chemical Safety Act: Listed substance

Antimony (CAS 7440-36-0)
Arsenic (CAS 7440-38-2)
Barium (CAS 7440-39-3)
Beryllium (CAS 7440-41-7)
Cadmium (CAS 7440-43-9)
Chromium (CAS 7440-47-3)
Copper (CAS 7440-50-8)
Lead (CAS 7439-92-1)
Mercury (CAS 7439-97-6)
Nickel (CAS 7440-02-0)
Selenium (CAS 7782-49-2)
Silver (CAS 7440-22-4)
Thallium (CAS 7440-28-0)
Zinc, elemental (CAS 7440-66-6)

US - Louisiana Spill Reporting: Listed substance

Antimony (CAS 7440-36-0)	Listed.
Arsenic (CAS 7440-38-2)	Listed.
Barium (CAS 7440-39-3)	Listed.
Beryllium (CAS 7440-41-7)	Listed.
Cadmium (CAS 7440-43-9)	Listed.
Chromium (CAS 7440-47-3)	Listed.
Copper (CAS 7440-50-8)	Listed.
Lead (CAS 7439-92-1)	Listed.
Manganese (CAS 7439-96-5)	Listed.
Mercury (CAS 7439-97-6)	Listed.
Nickel (CAS 7440-02-0)	Listed.
Selenium (CAS 7782-49-2)	Listed.
Silver (CAS 7440-22-4)	Listed.
Thallium (CAS 7440-28-0)	Listed.
Zinc, elemental (CAS 7440-66-6)	Listed.

US - Michigan Critical Materials Register: Parameter number

Arsenic (CAS 7440-38-2)
Beryllium (CAS 7440-41-7)
Cadmium (CAS 7440-43-9)
Chromium (CAS 7440-47-3)
Copper (CAS 7440-50-8)
Lead (CAS 7439-92-1)
Mercury (CAS 7439-97-6)
Nickel (CAS 7440-02-0)
Selenium (CAS 7782-49-2)
Silver (CAS 7440-22-4)
Zinc, elemental (CAS 7440-66-6)

US - Minnesota Haz Subs: Listed substance

Aluminum (CAS 7429-90-5)	Listed.
Antimony (CAS 7440-36-0)	Listed.
Arsenic (CAS 7440-38-2)	Listed.
Beryllium (CAS 7440-41-7)	Listed.
Cadmium (CAS 7440-43-9)	Listed.
Chromium (CAS 7440-47-3)	Listed.
Copper (CAS 7440-50-8)	Listed.
Lead (CAS 7439-92-1)	Listed.
Manganese (CAS 7439-96-5)	Listed.
Mercury (CAS 7439-97-6)	Listed.
Molybdenum (CAS 7439-98-7)	Listed.
Nickel (CAS 7440-02-0)	Listed.
Nitrogen (CAS 7727-37-9)	Listed.
Selenium (CAS 7782-49-2)	Listed.
Silver (CAS 7440-22-4)	Listed.

US - New Jersey RTK - Substances: Listed substance

Aluminum (CAS 7429-90-5)
Antimony (CAS 7440-36-0)
Arsenic (CAS 7440-38-2)
Barium (CAS 7440-39-3)
Beryllium (CAS 7440-41-7)
Boron (CAS 7440-42-8)
Cadmium (CAS 7440-43-9)
Chromium (CAS 7440-47-3)
Copper (CAS 7440-50-8)

Lead (CAS 7439-92-1)
Manganese (CAS 7439-96-5)
Mercury (CAS 7439-97-6)
Molybdenum (CAS 7439-98-7)
Nickel (CAS 7440-02-0)
Nitrogen (CAS 7727-37-9)
Selenium (CAS 7782-49-2)
Silver (CAS 7440-22-4)
Thallium (CAS 7440-28-0)
Zinc, elemental (CAS 7440-66-6)

US - North Carolina Toxic Air Pollutants: Listed substance

Arsenic (CAS 7440-38-2)
Beryllium (CAS 7440-41-7)
Cadmium (CAS 7440-43-9)
Manganese (CAS 7439-96-5)
Mercury (CAS 7439-97-6)
Nickel (CAS 7440-02-0)

US - Pennsylvania RTK - Hazardous Substances: Special hazard

Arsenic (CAS 7440-38-2)
Beryllium (CAS 7440-41-7)
Cadmium (CAS 7440-43-9)
Chromium (CAS 7440-47-3)
Nickel (CAS 7440-02-0)

US - Texas Effects Screening Levels Hazard Data: Simple asphyxiant

Nitrogen (CAS 7727-37-9)

US - Texas Effects Screening Levels: Listed substance

Aluminum (CAS 7429-90-5)	Listed.
Antimony (CAS 7440-36-0)	Listed.
Arsenic (CAS 7440-38-2)	Listed.
Barium (CAS 7440-39-3)	Listed.
Beryllium (CAS 7440-41-7)	Listed.
Boron (CAS 7440-42-8)	Listed.
Cadmium (CAS 7440-43-9)	Listed.
Chloride (CAS 16887-00-6)	Listed.
Chromium (CAS 7440-47-3)	Listed.
Copper (CAS 7440-50-8)	Listed.
Iron (CAS 7439-89-6)	Listed.
Lead (CAS 7439-92-1)	Listed.
Manganese (CAS 7439-96-5)	Listed.
Mercury (CAS 7439-97-6)	Listed.
Molybdenum (CAS 7439-98-7)	Listed.
Nickel (CAS 7440-02-0)	Listed.
Nitrogen (CAS 7727-37-9)	Listed.
Selenium (CAS 7782-49-2)	Listed.
Silver (CAS 7440-22-4)	Listed.
Thallium (CAS 7440-28-0)	Listed.
Zinc, elemental (CAS 7440-66-6)	Listed.

US - Washington Chemical of High Concern to Children: Listed substance

Antimony (CAS 7440-36-0)
Arsenic (CAS 7440-38-2)
Cadmium (CAS 7440-43-9)
Mercury (CAS 7439-97-6)

US. Massachusetts RTK - Substance List

Aluminum (CAS 7429-90-5)
Antimony (CAS 7440-36-0)
Arsenic (CAS 7440-38-2)
Barium (CAS 7440-39-3)
Beryllium (CAS 7440-41-7)
Cadmium (CAS 7440-43-9)
Chromium (CAS 7440-47-3)
Copper (CAS 7440-50-8)
Lead (CAS 7439-92-1)
Manganese (CAS 7439-96-5)
Mercury (CAS 7439-97-6)
Molybdenum (CAS 7439-98-7)
Nickel (CAS 7440-02-0)
Nitrogen (CAS 7727-37-9)
Selenium (CAS 7782-49-2)
Silver (CAS 7440-22-4)

Thallium (CAS 7440-28-0)
Zinc, elemental (CAS 7440-66-6)

US. New Jersey Worker and Community Right-to-Know Act

Aluminum (CAS 7429-90-5)
Antimony (CAS 7440-36-0)
Arsenic (CAS 7440-38-2)
Barium (CAS 7440-39-3)
Beryllium (CAS 7440-41-7)
Cadmium (CAS 7440-43-9)
Chromium (CAS 7440-47-3)
Copper (CAS 7440-50-8)
Lead (CAS 7439-92-1)
Manganese (CAS 7439-96-5)
Mercury (CAS 7439-97-6)
Nickel (CAS 7440-02-0)
Selenium (CAS 7782-49-2)
Silver (CAS 7440-22-4)
Thallium (CAS 7440-28-0)
Zinc, elemental (CAS 7440-66-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Aluminum (CAS 7429-90-5)
Antimony (CAS 7440-36-0)
Arsenic (CAS 7440-38-2)
Barium (CAS 7440-39-3)
Beryllium (CAS 7440-41-7)
Cadmium (CAS 7440-43-9)
Chromium (CAS 7440-47-3)
Copper (CAS 7440-50-8)
Lead (CAS 7439-92-1)
Manganese (CAS 7439-96-5)
Mercury (CAS 7439-97-6)
Molybdenum (CAS 7439-98-7)
Nickel (CAS 7440-02-0)
Nitrogen (CAS 7727-37-9)
Selenium (CAS 7782-49-2)
Silver (CAS 7440-22-4)
Thallium (CAS 7440-28-0)
Zinc, elemental (CAS 7440-66-6)

US. Rhode Island RTK

Aluminum (CAS 7429-90-5)
Antimony (CAS 7440-36-0)
Arsenic (CAS 7440-38-2)
Beryllium (CAS 7440-41-7)
Cadmium (CAS 7440-43-9)
Chromium (CAS 7440-47-3)
Copper (CAS 7440-50-8)
Lead (CAS 7439-92-1)
Manganese (CAS 7439-96-5)
Mercury (CAS 7439-97-6)
Molybdenum (CAS 7439-98-7)
Nickel (CAS 7440-02-0)
Nitrogen (CAS 7727-37-9)
Selenium (CAS 7782-49-2)
Silver (CAS 7440-22-4)
Thallium (CAS 7440-28-0)
Zinc, elemental (CAS 7440-66-6)

US. California Proposition 65



WARNING: This product can expose you to chemicals including Arsenic, which is known to the State of California to cause cancer, and Lead, 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.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Arsenic (CAS 7440-38-2)	Listed: February 27, 1987
Beryllium (CAS 7440-41-7)	Listed: October 1, 1987
Cadmium (CAS 7440-43-9)	Listed: October 1, 1987
Lead (CAS 7439-92-1)	Listed: October 1, 1992
Nickel (CAS 7440-02-0)	Listed: October 1, 1989

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Cadmium (CAS 7440-43-9)	Listed: May 1, 1997
Lead (CAS 7439-92-1)	Listed: February 27, 1987

Mercury (CAS 7439-97-6)	Listed: July 1, 1990
US - California Proposition 65 - CRT: Listed date/Female reproductive toxin	
Lead (CAS 7439-92-1)	Listed: February 27, 1987
US - California Proposition 65 - CRT: Listed date/Male reproductive toxin	
Cadmium (CAS 7440-43-9)	Listed: May 1, 1997
Lead (CAS 7439-92-1)	Listed: February 27, 1987

Inventory status

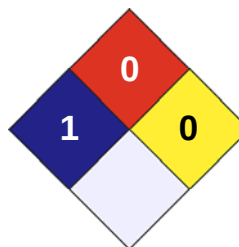
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date

12-April-2019

Version

01

Effective date

12-April-2019

Prepared by

Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

Other information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.