SAFETY DATA SHEET



1. Product and Company Identification

Product identifier Ice Guard Plus (4209-07)

Other means of identificationNot availableRecommended useWater treatmentRecommended restrictionsNone known.Manufacturer informationNu-Calgon

2611 Schuetz Road St. Louis, MO 63043 US

Phone: 314-469-7000 / 800-554-5499

Emergency Phone: 1-800-424-9300 (CHEMTREC)

Supplier See above.

2. Hazards Identification

Physical hazardsNot classified.Health hazardsNot classified.Environmental hazardsNot classified.WHMIS 2015 defined hazardsNot 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)

Hazard(s) not otherwise

classified (HNOC)

None known

None known.

Supplemental information

This product is a manufactured article and is exempt.

As per OSHA Definitions: 1910.1200 (c). Article means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

As per the Hazardous Products Act: A manufactured article means any article that is formed to a specific shape or design during manufacture, the intended use of which when in that form is dependent in whole or in part on its shape or design, and that, when being installed, if the intended use of the article requires it to be installed, and under normal conditions of use, will not release or otherwise cause an individual to be exposed to a hazardous product.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number %	
Aluminum oxide		1344-28-1	80-100*
Copper		7440-50-8	1-5*

Chemical name Common name and synonyms CAS number Silver 7440-22-4 All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. *CANADA GHS: The exact percentage (concentration) of composition has been withheld as a **Composition comments** US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200. 4. First Aid Measures Inhalation If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention. Skin contact Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists. Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical Eye contact attention if irritation persists. Ingestion Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention. Most important Direct contact with eyes may cause temporary irritation. symptoms/effects, acute and delayed Indication of immediate Treat patient symptomatically. medical attention and special treatment needed **General information** If you feel unwell, seek 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. Avoid contact with eyes and skin. Keep out of reach of children. 5. Fire Fighting Measures Treat for surrounding material. Suitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire. Unsuitable extinguishing media Specific hazards arising from During fire, gases hazardous to health may be formed. the chemical Special protective equipment Self-contained breathing apparatus and full protective clothing must be worn in case of fire. and precautions for firefighters Fire-fighting Move containers from fire area if you can do so without risk. equipment/instructions Specific methods Use standard firefighting procedures and consider the hazards of other involved materials. General fire hazards No unusual fire or explosion hazards noted. **Hazardous combustion** May include and are not limited to: Copper oxides. Oxides of aluminum. products 6. Accidental Release Measures Keep unnecessary personnel away. For personal protection, see section 8 of the SDS. Personal precautions, protective equipment and emergency procedures Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, Methods and materials for flush area with water. For waste disposal, see section 13 of the SDS. containment and cleaning up **Environmental precautions** Do not discharge into lakes, streams, ponds or public waters. 7. Handling and Storage Avoid prolonged exposure. Wash thoroughly after handling. Use good industrial hygiene practices Precautions for safe handling in handling this material. When using do not eat or drink. Conditions for safe storage, Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children. including any incompatibilities 8. Exposure Controls/Personal Protection Occupational exposure limits Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) Value Components Type Form Aluminum oxide (CAS **TWA** 10 mg/m3 1344-28-1)

Silver (CAS 7440-22-4)	Canada. Alberta OELs (Occupationa Components	l Health & Safety Code, Sche Type	dule 1, Table 2) Value	Form
Silver (CAS 7440-22-4) TWA	Copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
Canada, British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 29677, as amended) Type Value Form Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and mist. Silver (CAS 7440-22-4) STEL 1.3 mg/m3 Fume. Silver (CAS 7440-22-4) STEL 1.3 mg/m3 Fume. Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) Value Form Components Type Value Form Aluminum oxide (CAS TWA 1 mg/m3 Dust and mist. Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and fume. Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and fume. Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and fume. Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and fume. Copper (CAS 7440-50-8) TWA 0.1 mg/m3 Dust and fume. Copper (CAS 7440-50-8) TWA 0.1 mg/m3 Dust and fume. Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and mist.			0.2 mg/m3	Fume.
Safety Regulation 29687, as amended) Type Value Form Components TWA 1 mg/m3 Dust and mist. Silver (CAS 7440-50-8) TWA 1.2 mg/m3 Fume. Silver (CAS 7440-52-4) STEL 1.3 mg/m3 Pume. Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) Value Form Aluminum oxide (CAS TWA 1 mg/m3 Respirable fraction. 1344-28-1) TWA 1 mg/m3 Dust and mist. Copper (CAS 7440-50-8) TWA 0.1 mg/m3 Dust and fume. Silver (CAS 7440-22-4) TWA 1 mg/m3 Dust and fume. Components Type Value Form Components Type Value Form Components TWA 1 mg/m3 Dust and fume. Copper (CAS 7440-22-4) TWA 0.1 mg/m3 Dust and fume. Copper (CAS 7440-22-4) TWA 1 mg/m3 Dust and fume. Copper (CAS 7440-22-4) TWA 1 mg/m3 Dust and mist. Copper (CAS 7440-22-4)	Silver (CAS 7440-22-4)	TWA	0.1 mg/m3	
Copper (CAS 7440-50-8) TWA	Safety Regulation 296/97, as amende	ed)		-
1.2 mg/m3 Fume. 1.3 mg/m3 1.3 mg/m	· ·			Form
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Components Type Value Form Alluminum oxide (CAS) TWA 1 mg/m3 Respirable fraction. 20pper (CAS 7440-50-8) TWA 1 mg/m3 Dust and mist. 20pper (CAS 7440-22-4) TWA 0.1 mg/m3 Dust and fume. Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) Tomatomation of the promote of t		TWA	0.01 mg/m3	
Aluminum oxide (CAS TWA	, -	•	•	Form
Silver (CAS 7440-22-4) TWA 0.1 mg/m3 Dust and fume.			1 mg/m3	Respirable fraction.
Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) Type Value Form Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and fume. 0.2 mg/m3 Fume. Silver (CAS 7440-22-4) TWA 0.1 mg/m3 Dust and fume. Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality Of the Work Environment) Total dust. Aluminum oxide (CAS 1344-28-1) TWA 10 mg/m3 Dust and mist. Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and mist. Silver (CAS 7440-22-4) TWA 0.1 mg/m3 Dust and mist. US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Form Components Type Value Form Aluminum oxide (CAS 1344-28-1) PEL 5 mg/m3 Respirable fraction. Copper (CAS 7440-50-8) PEL 1 mg/m3 Dust and mist. Copper (CAS 7440-50-8) PEL 1 mg/m3 Dust and mist. Copper (CAS 7440-22-4) PEL 1 mg/m3 Dust and mist. US. OSHA Table Z-3 (29 CFR 1910.1000) Type Value Form Aluminum oxide (CAS 1344-28-1) Type Value Form Components T	Copper (CAS 7440-50-8)	TWA	S .	
Components Type Value Form Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and fume. 0.2 mg/m3 Fume. Silver (CAS 7440-22-4) TWA 0.1 mg/m3 Dust and fume. Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) Type Value Form Aluminum oxide (CAS 13440-50-8) TWA 10 mg/m3 Dust and mist. Total dust. Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and mist. Fume. Silver (CAS 7440-50-8) TWA 0.1 mg/m3 Fume. Fume. US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Form Respirable fraction. Components Type Value Form Aluminum oxide (CAS 13440-22-4) PEL 5 mg/m3 Respirable fraction. 1344-28-1) 15 mg/m3 Dust and mist. Fume. Copper (CAS 7440-50-8) PEL 1 mg/m3 Pume. US. OSHA Table Z-3 (29 CFR 1910.1000) Type Value Form Aluminum oxide (CAS 13440-22-4) PEL 0.01 mg/m3 Respirable fraction. US. OSHA Table Z-3 (29 CFR 1910.1000) Type Val	Silver (CAS 7440-22-4)	TWA	0.1 mg/m3	Dust and fume.
TWA	Canada. Ontario OELs. (Control of E	xposure to Biological or Che	mical Agents)	
Silver (CAS 7440-22-4) TWA 0.1 mg/m3 Dust and fume.	Components	Туре	Value	Form
Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) Type Value Form Aluminum oxide (CAS 1344-28-1) TWA 10 mg/m3 Total dust. Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and mist. Silver (CAS 7440-22-4) TWA 0.1 mg/m3 Fume. US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Value Form Components Type Value Form Aluminum oxide (CAS 1344-28-1) 15 mg/m3 Respirable fraction. Copper (CAS 7440-50-8) PEL 1 mg/m3 Dust and mist. Copper (CAS 7440-22-4) PEL 0.01 mg/m3 Fume. US. OSHA Table Z-3 (29 CFR 1910.1000) Type Value Form Aluminum oxide (CAS 1344-28-1) Type Value Form Aluminum oxide (CAS 15 mg/m3 Respirable fraction. Total dust. 50 mppcf Total dust. 15 mg/m3 Total dust. 50 mppcf Total dust. 15 mg/m3 Respirable fraction. US. ACGIH Threshold Limit Values Type Value Form	Copper (CAS 7440-50-8)	TWA		
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1344-28-1 Copper (CAS 7440-50-8)		_	-	
D.2 mg/m3 Fume.	Aluminum oxide (CAS 1344-28-1)		10 mg/m3	Total dust.
Value Form	Copper (CAS 7440-50-8)	TWA	S .	
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15 mg/m3 Total dust.		-	-	Form
Dust and mist.		PEL	5 mg/m3	Respirable fraction.
D.1 mg/m3 Fume.			15 mg/m3	Total dust.
US. OSHA Table Z-3 (29 CFR 1910.1000) Components Aluminum oxide (CAS 1344-28-1) US. ACGIH Threshold Limit Values 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 oxide (CAS 1 mg/m3 Respirable fraction. 1 mg/m3 Respirable fraction. 1 mg/m3 Dust and mist. 0.2 mg/m3 Fume.	Copper (CAS 7440-50-8)	PEL		
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US. ACGIH Threshold Limit Values Components Type Value Form Aluminum oxide (CAS 1 MA 1 mg/m3 Respirable fraction. TWA 1 mg/m3 Dust and mist. Copper (CAS 7440-50-8) TWA 1 mg/m3 Fume.		TWA	5 mg/m3	Respirable fraction.
US. ACGIH Threshold Limit Values Components Type Value Form Aluminum oxide (CAS 1344-28-1) Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and mist. Fume.	•		S	
US. ACGIH Threshold Limit Values Components Type Value Form Aluminum oxide (CAS 1344-28-1) Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and mist. 0.2 mg/m3 Fume.				
ComponentsTypeValueFormAluminum oxide (CAS 1344-28-1)TWA1 mg/m3Respirable fraction.Copper (CAS 7440-50-8)TWA1 mg/m3Dust and mist. Fume.			15 mppcf	Respirable fraction.
Aluminum oxide (CAS TWA 1 mg/m3 Respirable fraction. 1344-28-1) Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and mist. 0.2 mg/m3 Fume.		Type	Volue	Form
1344-28-1) Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and mist. 0.2 mg/m3 Fume.	· · · · · · · · · · · · · · · · · · ·			
Copper (CAS 7440-50-8) TWA 1 mg/m3 Dust and mist. 0.2 mg/m3 Fume.	Aluminum oxide (CAS 1344-28-1)	IWA	1 mg/m3	Respirable fraction.
	Copper (CAS 7440-50-8)	TWA		
	Silver (CAS 7440-22-4)	TWA	-	Dust and fume.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Туре	Value	Form	
Copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.	
		0.1 mg/m3	Fume.	
Silver (CAS 7440-22-4)	TWA	0.01 mg/m3	Dust.	

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering

controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields.

Skin protection

Hand protection Impervious gloves. Confirm with reputable supplier first.

Wear suitable protective clothing. As required by employer code. Other

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

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. When using do not eat or drink.

9. Physical and Chemical Properties

Solid. **Appearance** Solid. Physical state Solid. **Form** White Color Green

Odor Odorless Odor threshold Not available.

pН

Melting point/freezing point Not available. Initial boiling point and boiling 5432 °F (3000 °C)

range

Not available. Pour point Specific gravity Not available. Not available. Partition coefficient

(n-octanol/water)

Flash point Not available. Not available. **Evaporation rate** Flammability (solid, gas) Not available.

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.

Not available. Vapor pressure Vapor density Not available. Relative density Not available. Solubility(ies) Not available.

Not available. **Auto-ignition temperature** Not available. **Decomposition temperature** Not available. Viscosity

Other information

Not explosive. **Explosive properties Oxidizing properties** Not oxidizing.

10. Stability and Reactivity

Possibility of hazardous

The product is stable and non-reactive under normal conditions of use, storage and transport.

reactions

Reactivity

No dangerous reaction known under conditions of normal use.

Material is stable under normal conditions. Chemical stability

Conditions to avoid Keep away from extreme heat. Incompatible materials Strong oxidizing agents.

Hazardous decomposition

products

May include and are not limited to: Copper oxides. Oxides of aluminum.

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.

Prolonged inhalation may be harmful. Inhalation

Skin contact Prolonged skin contact may cause skin irritation.

Eye contact Direct contact with eyes may cause temporary irritation. Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Information on toxicological effects

Acute toxicity

Components **Species Test Results**

Aluminum oxide (CAS 1344-28-1)

Acute

Dermal

Not available LD50

Inhalation

> 10 mg/L, 4 Hours, ECHA LC50 Rat

> 2.3 mg/L, 4 Hours, ECHA

> 0.9 mg/L, 4 Hours 7.6 mg/L, 1 Hours

Oral

LD50 Rat > 15900 mg/kg, 14 days, ECHA

> 10000 mg/kg, Sigma Aldrich

> 2000 mg/kg, ECHA

5000 mg/kg, EMD Millipore

Copper (CAS 7440-50-8)

Acute

Dermal

LD50 Rat > 2000 mg/kg, ECHA

> 2000 mg/kg, 24 Hours

Inhalation

LC50 Rat > 5.1 mg/l/4h, ECHA

> 5.1 mg/L, 4 Hours

Oral

LD50 Rat > 2500 mg/kg

> 482 mg/kg, ECHA, female rat 481 mg/kg, ECHA, male rat

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Test Results Components **Species**

Silver (CAS 7440-22-4)

Acute Dermal

LD50 Guinea pig > 348 mg/kg, 24 Hours

> > 2000 mg/kg Rat

> > > 2000 mg/kg, 24 Hours

Inhalation

LC50 Rat > 5.2 mg/L, 4 Hours

750 µg/m3, 4 Hours

Oral

LD50 Mouse > 5000 mg/kg

> Rat > 5000 mg/kg 3702 mg/kg

> > 2000 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Exposure minutes Not available. Not available. Erythema value Oedema value Not available.

Serious eye damage/eye

irritation

Direct contact with eyes may cause temporary irritation.

Corneal opacity value Not available. Not available. Iris lesion value Not available. Conjunctival reddening

value

Recover days

Not available. Conjunctival oedema value Not available.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Mutagenicity No data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

See below. Carcinogenicity

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

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Teratogenicity Not available. Not classified. Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

Not an aspiration hazard.

Aspiration hazard

Prolonged inhalation may be harmful. **Chronic effects**

12. Ecological Information

See below **Ecotoxicity**

Ecotoxicological data

Species Test Results Components

Copper (CAS 7440-50-8)

IC50 0.048 mg/L, 72 Hours Algae Algae EC50 0.03 mg/L, 48 Hours Daphnia Crustacea

Aquatic

#30649

EC50 Water flea (Daphnia magna) 0.036 mg/L, 48 hours Crustacea

Fish LC50 Fathead minnow (Pimephales promelas) 0.032 - 0.054 mg/L, 96 hours

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Components Species Test Results

Silver (CAS 7440-22-4)

Crustacea EC50 Daphnia 0 mg/L, 48 Hours

Aquatic

Fish LC50 Fathead minnow (Pimephales promelas) 0.002 - 0.003 mg/L, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potentialNo data available.Mobility in soilNo data available.Mobility in generalNot 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

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.

Waste from residues / unused

products

Dispose of in accordance with local regulations. 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

Since emptied containers may retain product residue, follow label warnings even after container is

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

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 regulationsThis 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 oxide (CAS 1344-28-1) Listed.

Canada Priority Substances List (Second List): Listed substance

Aluminum oxide (CAS 1344-28-1) Listed.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions This product is a manufactured article and is exempt.

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.

All chemicals used are on the TSCA inventory.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Copper (CAS 7440-50-8) Listed. Silver (CAS 7440-22-4) Listed.

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

Not listed.

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

No

chemical

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.	
Aluminum oxide	1344-28-1	80-100*	
Copper	7440-50-8	1-5*	

Other federal regulations

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

Not regulated.

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 oxide (CAS 1344-28-1)
 Listed.

 Copper (CAS 7440-50-8)
 Listed.

 Silver (CAS 7440-22-4)
 Listed.

US - Illinois Chemical Safety Act: Listed substance

Copper (CAS 7440-50-8) Silver (CAS 7440-22-4)

US - Louisiana Spill Reporting: Listed substance

Copper (CAS 7440-50-8) Listed. Silver (CAS 7440-22-4) Listed.

US - Michigan Critical Materials Register: Parameter number

Copper (CAS 7440-50-8) Silver (CAS 7440-22-4)

US - Minnesota Haz Subs: Listed substance

 Aluminum oxide (CAS 1344-28-1)
 Listed.

 Copper (CAS 7440-50-8)
 Listed.

 Silver (CAS 7440-22-4)
 Listed.

US - New Jersey RTK - Substances: Listed substance

Aluminum oxide (CAS 1344-28-1) Copper (CAS 7440-50-8) Silver (CAS 7440-22-4)

US - Texas Effects Screening Levels: Listed substance

 Aluminum oxide (CAS 1344-28-1)
 Listed.

 Copper (CAS 7440-50-8)
 Listed.

 Silver (CAS 7440-22-4)
 Listed.

US. Massachusetts RTK - Substance List

Aluminum oxide (CAS 1344-28-1) Copper (CAS 7440-50-8)

Silver (CAS 7440-50-8

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

Aluminum oxide (CAS 1344-28-1)

Copper (CAS 7440-50-8) Silver (CAS 7440-22-4)

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

Aluminum oxide (CAS 1344-28-1)

Copper (CAS 7440-50-8)

Silver (CAS 7440-22-4)

US. Rhode Island RTK

Aluminum oxide (CAS 1344-28-1)

Copper (CAS 7440-50-8)

Silver (CAS 7440-22-4)

US. California Proposition 65

This product is not subject to warning labeling under the California Proposition 65 regulation.

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

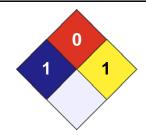
Canada Non-Domestic Substances List (NDSL) No
United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory Yes

*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 Serious Moderate Slight Minimal	4 3 2 1





Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. 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.

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

document.