

### SECTION 1: Identification

#### 1.1. Product identifier

Product form : Mixture  
Trade name : 71AG/27.5CU/1.5TI  
Product code : A00000454  
Product group : Trade product

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Lucas-Milhaupt Toronto  
290 Carlingview Drive  
M9W 5G1 Rexdale - Canada  
T +1 (416) 675-1860  
[LM\\_SDSinfo@lucasmilhaupt.com](mailto:LM_SDSinfo@lucasmilhaupt.com) - [www.lucasmilhaupt.com](http://www.lucasmilhaupt.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC Within the USA and Canada: 1-800-424-9300

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS CA)

Hazardous to the aquatic environment — Acute Hazard, Category 1 H400

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS CA labelling

Hazard pictograms (GHS CA) :



Signal word (GHS CA) : Warning

Hazard statements (GHS CA) : H400 - Very toxic to aquatic life.

Precautionary statements (GHS CA) : P273 - Avoid release to the environment.  
P391 - Collect spillage.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS CA)

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
Silver	Silver, metallic / Silver metal / CI 77820 / Nanoscale silver / Nanosilver / Silver, metal / Silver, elemental / C.I. 77820	(CAS-No.) 7440-22-4	70 - 72	Aquatic Acute 1, H400
Copper	C.I. 77400 / C.I. Pigment Metal 2 / Copper, elemental / CI 77400 / Copper metal / Copper, metallic / Pigment Metal 2 / Granulated copper	(CAS-No.) 7440-50-8	26 - 30	Aquatic Acute 1, H400
Titanium	Titanium sponge powders / Titanium powder, wetted / Titanium powder / Titanium powder, dry	(CAS-No.) 7440-32-6	1 - 2	Not classified

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Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water. Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
- First-aid measures after eye contact : Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell. Rinse mouth.
- First-aid measures general : Call a poison center or a doctor if you feel unwell.

#### 4.2. Most important symptoms and effects (acute and delayed)

No additional information available

#### 4.3. Immediate medical attention and special treatment, if necessary

- Other medical advice or treatment : Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

- Suitable extinguishing media : Dry powder. Water spray. Foam.

#### 5.2. Unsuitable extinguishing media

- Unsuitable extinguishing media : Water.

#### 5.3. Specific hazards arising from the hazardous product

- Fire hazard : Flammable solid.

#### 5.4. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

#### 6.2. Methods and materials for containment and cleaning up

- For containment : Collect spillage.
- Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

#### 6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Store in a well-ventilated place. Keep cool. Protect from sunlight. Keep away from ignition sources.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Copper (7440-50-8)		
USA - ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)

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<b>Copper (7440-50-8)</b>		
British Columbia	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (dust and mist)
Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
Nunavut	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> (dust and mist)
Nunavut	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> (dust and mist)
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup> (fume)
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
Yukon	OEL STEL (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
Yukon	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)

<b>Silver (7440-22-4)</b>		
USA - ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup>
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
British Columbia	OEL STEL (mg/m <sup>3</sup> )	0.03 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
Nunavut	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup> (metal)
Nunavut	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (metal)
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup> (metal)
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (metal)
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	0.03 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup>

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: No data available
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable, Flammable solid.
Vapour pressure	: No data available
Vapour pressure at 50 °C	: No data available
Relative density	: Not applicable
Solubility	: No data available
Log Pow	: No data available
Explosive limits	: Not applicable

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport. Flammable solid.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: None under recommended storage and handling conditions (see section 7). Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Do not allow contact with air.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Silver (7440-22-4)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified

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STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. Very toxic to aquatic life.

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Not classified

#### Copper (7440-50-8)

EC50 96h algae (1)	0.031 - 0.054 mg/l (Species: Pseudokirchneriella subcapitata [static])
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#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Ozone : Not classified

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

### SECTION 14: Transport information

#### 14.1. Basic shipping description

In accordance with TDG

#### Transportation of Dangerous Goods

Not regulated for transport

#### 14.2. Transport information/DOT

#### Department of Transport

Not regulated for transport

#### 14.3. Air and sea transport

#### IMDG

Not regulated for transport

#### IATA

Not regulated for transport

### SECTION 15: Regulatory information

#### 15.1. National regulations

##### Copper (7440-50-8)

Listed on the Canadian DSL (Domestic Substances List)

##### Silver (7440-22-4)

Listed on the Canadian DSL (Domestic Substances List)

##### Titanium (7440-32-6)

Listed on the Canadian DSL (Domestic Substances List)

#### 15.2. International regulations

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### Copper (7440-50-8)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on Turkish inventory of chemical

### Silver (7440-22-4)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on Turkish inventory of chemical

### Titanium (7440-32-6)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on Turkish inventory of chemical

## SECTION 16: Other information

Date of issue : 29 November 2017

Full text of H-statements:

H400	Very toxic to aquatic life.
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SDS Canada (GHS)

*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.*