SECTION 1: Identification

1.1. Identification
Product form: Mixture
Trade name: PREMABRAZE 616
Product code: A00000299

1.2. Recommended use and restrictions on use
No additional information available

1.3. Supplier
Lucas-Milhaupt, Inc.
5656 South Pennsylvania Ave.
Cudahy, WI 53110 - USA
T (414)-769-6000
LM_SDSinfo@lucasmilhaupt.com - www.Lucasmilhaupt.com

1.4. Emergency telephone number
Emergency number: CHEMTREC within the USA and Canada: 1-800-424-9300
CHEMTREC outside the USA and Canada +1 701-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification
Specific target organ — Repeated exposure, Category 2
May cause damage to organs through prolonged or repeated exposure.
Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling
Signal word (GHS US): Warning
Hazard pictograms (GHS US):
Hazard statements (GHS US): H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statements (GHS US):
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P314 - Get medical advice/attention if you feel unwell.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>(CAS-No.) 7440-22-4</td>
<td>60.5 - 62.5</td>
</tr>
<tr>
<td>Copper</td>
<td>(CAS-No.) 7440-50-8</td>
<td>22.5 - 25.5</td>
</tr>
<tr>
<td>Indium</td>
<td>(CAS-No.) 7440-74-6</td>
<td>14 - 15</td>
</tr>
</tbody>
</table>
SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general: Call a poison center or a doctor if you feel unwell.
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.
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.

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

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

Unsuitable extinguishing media: Water.

5.2. Specific hazards arising from the chemical

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

5.3. 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

6.1.1. For non-emergency personnel

Emergency procedures: Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment: Collect spillage.

Methods for cleaning up: Mechanically recover the product.

Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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. Do not breathe dust/fume/gas/mist/vapours/spray.

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

Storage conditions: Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Copper (7440-50-8)</th>
<th>Indium (7440-74-6)</th>
<th>Silver (7440-22-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>white to light yellow metals, various forms.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PREMABRAZE 616
Safety Data Sheet

Log Pow : No data available
Auto-ignition temperature : Not applicable
Decomposition temperature : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive limits : Not applicable
Explosive properties : No data available
Oxidising properties : No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

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

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
Acids. Alkali earth metals.

10.6. 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

<table>
<thead>
<tr>
<th>Indium (7440-74-6)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>4200 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>4200 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Silver (7440-22-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
</tr>
<tr>
<td>Skin corrosion/irritation : Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation : Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation : Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity : Not classified</td>
</tr>
<tr>
<td>Carcinogenicity : Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity : Not classified</td>
</tr>
<tr>
<td>STOT-single exposure : Not classified</td>
</tr>
<tr>
<td>STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>Aspiration hazard : Not classified</td>
</tr>
<tr>
<td>Viscosity, kinematic : No data available</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Copper (7440-50-8)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>0.0068 - 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>&lt; 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Silver (7440-22-4)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>0.00155 - 0.00293 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>0.00024 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>0.0062 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])</td>
</tr>
</tbody>
</table>

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

No additional information available

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

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Copper (7440-50-8)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
<td></td>
</tr>
<tr>
<td>Subject to reporting requirements of United States SARA Section 313</td>
<td></td>
</tr>
<tr>
<td>CERCLA RQ</td>
<td>5000 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is &gt;100 µm</td>
</tr>
</tbody>
</table>
PREMABRAZE 616
Safety Data Sheet

Indium (7440-74-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Silver (7440-22-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ 1000 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

15.2. International regulations

Copper (7440-50-8)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Indium (7440-74-6)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Silver (7440-22-4)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper(7440-50-8)</td>
<td>U.S. - Massachusetts - Right To Know List</td>
</tr>
<tr>
<td></td>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
<tr>
<td></td>
<td>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List</td>
</tr>
<tr>
<td>Indium(7440-74-6)</td>
<td>U.S. - Massachusetts - Right To Know List</td>
</tr>
<tr>
<td></td>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
<tr>
<td></td>
<td>U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
<tr>
<td>Silver(7440-22-4)</td>
<td>U.S. - Massachusetts - Right To Know List</td>
</tr>
<tr>
<td></td>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
<tr>
<td></td>
<td>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List</td>
</tr>
<tr>
<td></td>
<td>U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
</tbody>
</table>

SECTION 16: Other information

Full text of H-statements:

H373 May cause damage to organs through prolonged or repeated exposure.

SDS US (GHS HazCom 2012)

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

Lucas-Milhaupt, Inc.