**SECTION 1: Identification**

1.1. **Product identifier**

- **Product form**: Mixture
- **Trade name**: HI TEMP 675
- **Product code**: A00000467
- **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_SDInfo@lucasmilhaupt.com - 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**

<table>
<thead>
<tr>
<th>Classification (GHS CA)</th>
<th>H317</th>
<th>H351</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin sensitisation, category 1B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity, Category 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity — Repeated exposure, Category 1</td>
<td>H372</td>
<td></td>
</tr>
<tr>
<td>Hazardous to the aquatic environment — Acute Hazard, Category 1</td>
<td>H400</td>
<td></td>
</tr>
</tbody>
</table>

Full text of H statements : see section 16

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

**GHS CA labelling**

<table>
<thead>
<tr>
<th>Hazard pictograms (GHS CA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Pictogram]</td>
</tr>
</tbody>
</table>

**Signal word (GHS CA)** : Danger

**Hazard statements (GHS CA)** :
- H317 - May cause an allergic skin reaction.
- H351 - Suspected of causing cancer.
- H372 - Causes damage to organs through prolonged or repeated exposure.
- H400 - Very toxic to aquatic life.

**Precautionary statements (GHS CA)** :
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
- P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 - Wash hands, forearms and face thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 - IF ON SKIN: Wash with plenty of water.
- P308+P313 - IF exposed or concerned: Get medical advice/attention.
- P314 - Get medical advice/attention if you feel unwell.
- P314 - Specific treatment (see supplemental first aid instruction on this label)
- P321 - If skin irritation or rash occurs: Get medical advice/attention.
- P362+P364 - Take off contaminated clothing and wash it before reuse.
- P391 - Collect spillage.
- P405 - Store locked up.
- 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

<table>
<thead>
<tr>
<th>Name</th>
<th>Chemical name / Synonyms</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS CA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>C.I. 77400 / C.I. Pigment Metal 2 / Copper, elemental / CI 77400 / Copper metal / Copper, metallic / Pigment Metal 2 / Granulated copper</td>
<td>(CAS-No.) 7440-50-8</td>
<td>66.5 - 68.5</td>
<td>Aquatic Acute 1, H400</td>
</tr>
<tr>
<td>Manganese</td>
<td>Manganese, elemental / Manganese metal / Manganese elemental</td>
<td>(CAS-No.) 7439-96-5</td>
<td>22.5 - 24.5</td>
<td>Not classified</td>
</tr>
<tr>
<td>Nickel</td>
<td>Nickel metal / Nickel, elemental / Nickel, metallic / Nickel, metal / C.I. 77775</td>
<td>(CAS-No.) 7440-02-0</td>
<td>8 - 10</td>
<td>Skin Sens. 1, H317 / Carc. 2, H351 / STOT RE 1, H372 / Aquatic Acute 1, H400</td>
</tr>
</tbody>
</table>

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. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
- 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.
- First-aid measures general: IF exposed or concerned: Get medical advice/attention.

4.2. Most important symptoms and effects (acute and delayed)
- Symptoms/effects after skin contact: May cause an allergic skin reaction.

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
No additional information available

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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

Hygiene measures: Separate working clothes from town clothes. Launder separately. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Copper (7440-50-8)</th>
<th>ACGIH TWA (mg/m³)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA - ACGIH</td>
<td>0.2 mg/m³ (fume)</td>
<td>1 mg/m³ (dust and mist)</td>
</tr>
<tr>
<td>USA - OSHA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada (Quebec)</td>
<td>0.2 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Alberta</td>
<td>0.2 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>British Columbia</td>
<td>1 mg/m³ (dust and mist)</td>
<td></td>
</tr>
<tr>
<td>Manitoba</td>
<td>0.2 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>New Brunswick</td>
<td>0.2 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Newfoundland &amp; Labrador</td>
<td>0.2 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>0.2 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Nunavut</td>
<td>3 mg/m³ (dust and mist)</td>
<td></td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>0.2 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Ontario</td>
<td>0.2 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>0.2 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>0.6 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>0.2 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Yukon</td>
<td>0.2 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Yukon</td>
<td>0.2 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Manganese (7439-96-5)</td>
<td>ACGIH TWA (mg/m³)</td>
<td>0.02 mg/m³ (respirable particulate matter)</td>
</tr>
<tr>
<td>USA - ACGIH</td>
<td>0.1 mg/m³ (inhalable particulate matter)</td>
<td></td>
</tr>
<tr>
<td>USA - OSHA</td>
<td>5 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Canada (Quebec)</td>
<td>0.2 mg/m³ (total dust and fume)</td>
<td></td>
</tr>
<tr>
<td>Alberta</td>
<td>0.2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>British Columbia</td>
<td>0.2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Manitoba</td>
<td>0.02 mg/m³ (respirable particulate matter)</td>
<td></td>
</tr>
<tr>
<td>New Brunswick</td>
<td>0.2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Newfoundland &amp; Labrador</td>
<td>0.02 mg/m³ (respirable particulate matter)</td>
<td></td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>0.02 mg/m³ (respirable particulate matter)</td>
<td></td>
</tr>
<tr>
<td>Nunavut</td>
<td>0.6 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Nunavut</td>
<td>0.2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>0.6 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>0.2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Ontario</td>
<td>0.2 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>
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 inadequate ventilation] wear respiratory protection.

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.
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.
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).
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

Manganese (7439-96-5)
LD50 oral rat 9 g/kg
ATE CA (oral) 9000 mg/kg bodyweight

Nickel (7440-02-0)
LD50 oral rat > 9000 mg/kg
LC50 inhalation rat (mg/l) > 10.2 mg/l (Exposure time: 1 h)
Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Not classified
Respiratory or skin sensitization: May cause an allergic skin reaction.
Germ cell mutagenicity: Not classified
Carcinogenicity: Suspected of causing cancer.
Reproductive toxicity: Not classified

STOT-single exposure: Causes damage to organs through prolonged or repeated exposure.

STOT-repeated exposure

Nickel (7440-02-0)
STOT-repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard: Not classified
Symptoms/effects after skin contact: May cause an allergic skin reaction.

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)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 96h algae (1)</td>
<td>0.031 - 0.054 mg/l (Species: Pseudokirchneriella subcapitata [static])</td>
</tr>
</tbody>
</table>

**Nickel (7440-02-0)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>&gt; 100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>1.3 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>&gt; 100 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
<td>1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])</td>
</tr>
<tr>
<td>EC50 72h algae (1)</td>
<td>0.18 mg/l (Species: Pseudokirchneriella subcapitata)</td>
</tr>
<tr>
<td>EC50 96h algae (1)</td>
<td>0.174 - 0.311 mg/l (Species: Pseudokirchneriella subcapitata [static])</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**
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)

**Manganese (7439-96-5)**
Listed on the Canadian DSL (Domestic Substances List)

**Nickel (7440-02-0)**
Listed on the Canadian DSL (Domestic Substances List)

**15.2. International regulations**
**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

**Manganese (7439-96-5)**
- 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

**Nickel (7440-02-0)**
- 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)
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- 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:**

<table>
<thead>
<tr>
<th>H-statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer.</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
</tbody>
</table>

**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.