Thermomelt® HEAT-STIK Marker 750 °F (399, 400 °C), 800 °F (427 °C)

LA-CO Industries, Inc.

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
according to Canadian Hazardous Products Regulations (HPR)
Date of issue: 12/22/2015
Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product form : Mixture
Trade name : Thermomelt® HEAT-STIK Marker 750 °F (399, 400 °C), 800 °F (427 °C)

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture : Temperature indicator

1.3. Details of the supplier of the safety data sheet
LA-CO Industries, Inc.
1201 Pratt Boulevard
Elk Grove Village, IL. 60007-5746
Phone: (847) 956-7600
Fax: (847) 956-9885
E-mail: customer_service@laco.com

1.4. Emergency telephone number

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification in accordance with the Globally Harmonized Standard
Acute Tox. 4 (Oral) H302
Resp. Sens. 1 H334
Skin Sens. 1 H317
Muta. 2 H341
Carc. 1A H350
Repr. 1B H360
STOT RE 2 H373
Aquatic Acute 1 H400
Aquatic Chronic 1 H410

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

2.2. Label elements
GHS-US labelling
Hazard pictograms (GHS-US) :

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H302 - Harmful if swallowed
H317 - May cause an allergic skin reaction
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341 - Suspected of causing genetic defects
H350 - May cause cancer
H360 - May damage fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing must not be allowed out of the workplace
P273 - Avoid release to the environment
P280 - Wear eye protection, protective clothing, protective gloves
Thermomelt® HEAT-STIK Marker 750 °F (399, 400 °C), 800 °F (427 °C)

Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
according to Canadian Hazardous Products Regulations (HPR)

22/12/2015 EN (English) SDS Ref.: LACO1512009 2/8

**SECTION 3: Composition/information on ingredients**

**3.1. Substance**
Not applicable

**3.2. Mixture**

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>% (w/w)</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>cobalt sulphate</td>
<td>(CAS No) 10124-43-3</td>
<td>38.74 – 39.18 : 750 °F</td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40.52 – 40.97 : 800 °F</td>
<td>Resp. Sens. 1, H334 Muta. 2, H341 Carc. 1B, H350</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Resp. 1B, H360 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td>nickel sulphate</td>
<td>(CAS No) 7786-81-4</td>
<td>&lt; 0.35 : 750 °F &lt; 0.45 : 800 °F</td>
<td>Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1A, H350</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Resp. 1B, H360 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

First-aid measures general: Never give anything by mouth to an unconscious person. If exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

First-aid measures after skin contact: If skin irritation or rash occurs: Get medical advice/attention. Wash with plenty of soap and water. Wash contaminated clothing before reuse.

First-aid measures after eye contact: In case of contact, immediately flush eyes with plenty of water. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/injuries: May cause cancer. Suspected of causing genetic defects. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Symptoms/injuries after inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer by inhalation.

Symptoms/injuries after skin contact: May cause an allergic skin reaction.

Symptoms/injuries after ingestion: Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

P284 - In case of insufficient ventilation, wear suitable respiratory equipment
P301+P312 - If swallowed: Call a doctor if you feel unwell
P302+P352 - If on skin: Wash with plenty of water
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P308+P313 - If exposed or concerned: Get medical advice/attention
P314 - Get medical advice/attention if you feel unwell
P321 - Specific treatment (see First aid measures on this label)
P330 - Rinse mouth
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P342+P311 - If experiencing respiratory symptoms: Call a doctor
P363 - Wash contaminated clothing 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
SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture
Fire hazard: Burning produces irritating, toxic and noxious fumes.
Explosion hazard: Product is not explosive.
Reactivity: No dangerous reactions known.

5.3. Advice for firefighters
Firefighting instructions: Do not allow run-off from fire fighting to enter drains or water courses.
Protection during firefighting: Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures: Avoid contact with skin, eyes and clothing. Avoid creating or spreading dust.

6.1.1. For non-emergency personnel
Protective equipment: Chemical goggles or safety glasses. Wear suitable gloves.
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Chemical goggles or safety glasses. Wear suitable gloves.
Emergency procedures: Ventilate area. Stop leak if safe to do so.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
For containment: Contain and collect as any solid.
Methods for cleaning up: Minimize generation of dust.

6.4. Reference to other sections
Section 8: personal protective equipment. Section 7: safe handling.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Avoid contact with skin, eyes and clothing. Avoid breathing dust. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.
Hygiene measures: Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep container closed when not in use.
Heat and ignition sources: Keep away from heat, sparks and flame.
Prohibitions on mixed storage: Incompatible materials.
Storage area: Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)
Temperature indicator.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Thermomelt® HEAT-STIK Marker 750 °F (399, 400 °C), 800 °F (427 °C) |
|---|---|
| ACGIH | Not applicable |
Thermomelt® HEAT-STIK Marker 750 °F (399, 400 °C), 800 °F (427 °C)

Safety Data Sheet

Thermomelt® HEAT-STIK Marker 750 °F (399, 400 °C), 800 °F (427 °C)

<table>
<thead>
<tr>
<th>cobalt sulphate (10124-43-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
</tr>
<tr>
<td>ACGIH</td>
</tr>
<tr>
<td>OSHA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>nickel sulphate (7786-81-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
</tr>
<tr>
<td>OSHA</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Personal protective equipment: Avoid all unnecessary exposure.

Hand protection: Use rubber gloves.

Eye protection: In case of dust production: protective goggles.

Skin and body protection: Long sleeved protective clothing.

Respiratory protection: In case of inadequate ventilation wear respiratory protection. Use air-purifying respirator equipped with particulate filtering cartridges. NIOSH. Approved respirator.

Other information: Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Solid

Appearance: A solid crayon-like marker.

Colour: Variable.

Odour: No data available

Odour threshold: No data available

pH: No data available

Relative evaporation rate (butyl acetate=1): No data available

Melting point: No data available

Freezing point: No data available

Boiling point: No data available

Flash point: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Flammability (solid, gas): No data available

Vapour pressure: No data available

Relative vapour density at 20 °C: No data available

Relative density: No data available

Solubility: No data available

Log Pow: No data available

Log Kow: No data available

Viscosity, kinematic: No data available

Viscosity, dynamic: No data available

Explosive properties: No data available

Oxidising properties: No data available

Explosive limits: No data available

9.2. Other information

VOC content: 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.
10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Burning produces irritating, toxic and noxious fumes.

**SECTION 11: Toxicological information**

11.1. Information on toxicological effects

**Acute toxicity**
- Oral: Harmful if swallowed.

**Thermomelt® HEAT-STIK Marker 750 °F (399, 400 °C), 800 °F (427 °C)**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>cobalt sulphate (10124-43-3)</td>
<td>ATE CLP (oral)</td>
<td>1843.192 mg/kg bodyweight</td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>766 mg/kg</td>
<td></td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 2000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>ATE CLP (oral)</td>
<td>768.000 mg/kg bodyweight</td>
<td></td>
</tr>
<tr>
<td><strong>nickel sulphate (7786-81-4)</strong></td>
<td>ATE CLP (oral)</td>
<td>361.900 mg/kg bodyweight</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>2.48 mg/l/4h</td>
<td></td>
</tr>
<tr>
<td>ATE CLP (vapours)</td>
<td>2.480 mg/l/4h</td>
<td></td>
</tr>
<tr>
<td>ATE CLP (dust,mist)</td>
<td>2.480 mg/l/4h</td>
<td></td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**
- Not classified

**Serious eye damage/irritation**
- Not classified

**Respiratory or skin sensitisation**
- May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

**Germ cell mutagenicity**
- Suspected of causing genetic defects.

**Carcinogenicity**
- May cause cancer.

**Reproductive toxicity**
- May damage fertility or the unborn child.

**Specific target organ toxicity (single exposure)**
- Not classified

**Specific target organ toxicity (repeated exposure)**
- May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard**
- Not classified

**Potential adverse human health effects and symptoms**
- May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer by inhalation.
- May cause an allergic skin reaction.
- Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.
- Inhalation; Skin and eye contact

**SECTION 12: Ecological information**

12.1 **Toxicity**
- Ecology - water: Very toxic to aquatic life with long lasting effects.

**Thermomelt® HEAT-STIK Marker 750 °F (399, 400 °C), 800 °F (427 °C)**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>cobalt sulphate (10124-43-3)</td>
<td>LOEC (chronic) 1.61 mg/l 23% survival</td>
</tr>
<tr>
<td></td>
<td>NOEC (chronic) 0.81 mg/l 28 days</td>
</tr>
</tbody>
</table>

22/12/2015 EN (English) SDS Ref.: LACO1512009 5/8
Thermomelt® HEAT-STIK Marker 750 °F (399, 400 °C), 800 °F (427 °C)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
generated according to Canadian Hazardous Products Regulations (HPR)

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>nickel sulphate (7786-81-4)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>15.3 mg/l 96 h, no mortality observed</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>&gt; 200 μg/l 48 h</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>cobalt sulphate (10124-43-3)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
<td>Not expected to bioaccumulate.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with DOT and TDG

Transport document description : UN3077 Environmentally hazardous substances, solid, n.o.s. (cobalt sulphate), 9, III
UN-No.(DOT) : UN3077
Proper Shipping Name (DOT) : Environmentally hazardous substances, solid, n.o.s. (cobalt sulphate)
Transport hazard class(es) (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)
Packing group (DOT) : III - Minor Danger
Dangerous for the environment : Yes
Marine pollutant : Yes

ADR

Transport document description : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (cobalt sulphate), 9, III, (E)
Proper Shipping Name (ADR) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (cobalt sulphate)
Packing group (ADR) : III
Transport hazard class(es) (ADR) : 9
Dangerous for the environment : Yes
Marine pollutant : Yes

Transport by sea

UN-No. (IMDG) : UN 3077
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (cobalt sulphate)
Transport hazard class(es) (IMDG) : 9
Packing group (IMDG) : III
Dangerous for the environment : Yes
Thermomelt® HEAT-STIK Marker 750 °F (399, 400 °C), 800 °F (427 °C)  
Safety Data Sheet  
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
according to Canadian Hazardous Products Regulations (HPR)

<table>
<thead>
<tr>
<th>Marine pollutant</th>
<th>Yes</th>
</tr>
</thead>
</table>

### Air transport

- **UN-No. (IATA)**: UN 3077
- **Proper Shipping Name (IATA)**: Environmentally hazardous substance, solid, n.o.s. (cobalt sulphate)
- **Transport hazard class(es) (IATA)**: 9
- **Packing group (IATA)**: III
- **Dangerous for the environment**: Yes
- **Marine pollutant**: Yes

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

- **cobalt sulphate (10124-43-3)**
  - Listed on the United States TSCA (Toxic Substances Control Act) inventory

- **nickel sulphate (7786-81-4)**
  - Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

**CANADA**

- **Cobalt(II) sulphate (10124-43-3)**
  - Listed on the Canadian DSL (Domestic Substances List) inventory

- **nickel sulphate (7786-81-4)**
  - Listed on the Canadian DSL (Domestic Substances List) inventory

**EU-Regulations**

- **Cobalt(II) sulphate (10124-43-3)**
  - Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

- **nickel sulphate (7786-81-4)**
  - Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**National regulations**

- **Thermomelt® HEAT-STIK Marker 750 °F (399, 400 °C), 800 °F (427 °C)**
  - All components are listed on the EEC inventory European Inventory of Existing Commercial Chemical Substances (EINECS)
  - All ingredients are listed in the Toxic Substances Control Act (TSCA)
  - All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL)

#### 15.3. US State regulations

- **nickel sulphate (7786-81-4)**
  - U.S. - New Jersey - Right to Know Hazardous Substance List
  - U.S. - New York - Right to Know List of Hazardous Chemicals
  - U.S. - Pennsylvania - List of Hazardous Substances
Thermomelt® HEAT-STIK Marker 750 °F (399, 400 °C), 800 °F (427 °C)
Safety Data Sheet

SECTION 16: Other information

Data sources
- ACGIH (American Conference of Government Industrial Hygienists).

Abbreviations and acronyms
- ATE: Acute Toxicity Estimate. CAS (Chemical Abstracts Service) number.
- CLP: Classification, Labelling, Packaging.
- EC50: Environmental Concentration associated with a response by 50% of the test population.
- GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
- LD50: Lethal Dose for 50% of the test population.
- OSHA: Occupational Safety & Health Administration.
- PBT: Persistent, Bioaccumulative, Toxic.
- TWA: Time Weight Average.
- TSCA: Toxic Substances Control Act.

Other information
- None.

NFPA health hazard
- 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard
- 1 - Must be preheated before ignition can occur.

NFPA reactivity
- 0 - Normally stable, even under fire exposure conditions, and not reactive with water.

Full text of H-statements:

<table>
<thead>
<tr>
<th>H</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>H334</td>
<td>May cause allergy or asthma symptoms or breathing difficulties if inhaled</td>
</tr>
<tr>
<td>H341</td>
<td>Suspected of causing genetic defects</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer</td>
</tr>
<tr>
<td>H360</td>
<td>May damage fertility or the unborn child</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

SDS Prepared by: The Redstone Group, LLC
6077 Frantz Rd.
Suite 206
Dublin, OH USA 43016
T 614-923-7472
www.redstonegrp.com

LACO NA GHS SDS

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.