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

1.1. Product identifier
Product form: Mixture
Trade name: Tempilstik® 185 °F (85 °C), 188 °F (87 °C), 250 °F (121 °C), 425 °F (218 °C), 428 °F (220 °C), 1250 °F (677 °C), 248 °F (120 °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
Carc. 2 H351
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): Warning
Hazard statements (GHS-US): H351 - Suspected of causing cancer (Inhalation)
Precautionary statements (GHS-US):
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves
P308+P313 - If exposed or concerned: Get medical advice/attention
P405 - Store locked up
P501 - Dispose of contents/container to an authorised waste collection point

2.3. Other hazards
2.4 Unknown acute toxicity (GHS US)
3.09 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
3.09 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
3.09 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

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>2',4'-dimethylacetoacetalide</td>
<td>(CAS No) 97-36-9</td>
<td>79.74 : 185 °F 86.46 : 188 °F</td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td>Carbon black</td>
<td>(CAS No) 1333-86-4</td>
<td>13.46 : 185 °F 2.69 : 188 °F 0.14 : 250 °F, 248 °F 0.47 : 425 °F 0.49 : 428 °F 0.57 : 1250 °F</td>
<td>Carc. 2, H351</td>
</tr>
<tr>
<td>butyl 4-hydroxybenzoate</td>
<td>(CAS No) 94-26-8</td>
<td>1.13 : 185 °F</td>
<td>Skin Irrit. 2, H315  Eye Irrit. 2A, H319  STOT SE 3, H335</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.
- **First-aid measures after inhalation**: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.
- **First-aid measures after skin contact**: Gently wash with plenty of soap and water.
- **First-aid measures after eye contact**: In case of contact, immediately flush eyes with plenty of water.
- **First-aid measures after ingestion**: Call a POISON CENTER or doctor/physician if you feel unwell.

#### 4.2. Most important symptoms and effects, both acute and delayed
- **Symptoms/injuries after inhalation**: May cause cancer by inhalation.

#### 4.3. Indication of any immediate medical attention and special treatment needed
- Treat symptomatically.

### 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**: No particular fire or explosion hazard.
- **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 creating or spreading dust.

##### 6.1.1. For non-emergency personnel
- **Protective equipment**: Wear suitable gloves.
- **Emergency procedures**: Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders
- **Protective equipment**: Wear suitable gloves.
- **Emergency procedures**: Stop leak if safe to do so. Ventilate area.

#### 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: Sweep or shovel spills into appropriate container for disposal. Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting.

6.4. Reference to other sections
Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid creating or spreading dust.

Hygiene measures: Do not eat, drink or smoke when using this product. 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
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

<table>
<thead>
<tr>
<th>Compound</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Canada (Quebec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tempilstik® 185 °F (85 °C), 188 °F (87 °C), 250 °F (121 °C), 425 °F (218 °C), 428 °F (220 °C), 1250 °F (677 °C), 248 °F (120 °C)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>VEMP (mg/m³)</td>
</tr>
<tr>
<td>2',4'-dimethylacetoacataniilide (97-36-9)</td>
<td>ACGIH</td>
<td>OSHA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not applicable</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>butyl 4-hydroxybenzoate (94-26-8)</td>
<td>ACGIH</td>
<td>OSHA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not applicable</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Carbon black (1333-86-4)</td>
<td>ACGIH</td>
<td>OSHA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACGIH TWA (mg/m³)</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.5 mg/m³</td>
<td>3.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACGIH Remark (ACGIH)</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bronchitis</td>
<td>3.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 mg/m³ (Fibres de carbone et de graphite; Poussière totale)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 mg/m³ (Fibres de carbone et de graphite; Poussière respirable)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3.5 mg/m³</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.
Respiratory protection: In case of inadequate ventilation wear respiratory protection. Use air-purifying respirator equipped with particulate filtering cartridges.
Environmental exposure controls: Prevent leakage or spillage.
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
Tempilstik® 185 °F (85 °C), 188 °F (87 °C), 250 °F (121 °C), 425 °F (218 °C), 428 °F (220 °C), 1250 °F (677 °C), 248 °F (120 °C)

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according to Canadian Hazardous Products Regulations (HPR)

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
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
Carbon oxides (CO, CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Not classified
2',4'-dimethylacetoacetyl (97-36-9)
LD50 oral rat: 1995 mg/kg
ATE CLP (oral): 1995.000 mg/kg bodyweight

butyl 4-hydroxybenzoate (94-26-8)
LD50 oral rat: 13200 mg/kg
ATE CLP (oral): 13200.000 mg/kg bodyweight

Carbon black (1333-86-4)
LD50 oral rat: > 8000 mg/kg
LC50 inhalation rat (mg/l): > 4.8 mg/m³ 4 h

Skin corrosion/irritation: Not classified
Tempilstik® 185 °F (85 °C), 188 °F (87 °C), 250 °F (121 °C), 425 °F (218 °C), 428 °F (220 °C), 1250 °F (677 °C), 248 °F (120 °C)

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according to Canadian Hazardous Products Regulations (HPR)

<table>
<thead>
<tr>
<th>Serious eye damage/irritation</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Suspected of causing cancer (Inhalation).</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Carbon black (1333-86-4)**

<table>
<thead>
<tr>
<th>IARC group</th>
<th>2B - Possibly carcinogenic to humans, Inhalation of dust</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Toxicology Program (NTP) Status</td>
<td>Not listed in carcinogenicity class</td>
</tr>
</tbody>
</table>

**Reproductive toxicity**

<table>
<thead>
<tr>
<th>Specific target organ toxicity (single exposure)</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Aspiration hazard**

<table>
<thead>
<tr>
<th>Potential adverse human health effects and symptoms</th>
<th>Not classified</th>
</tr>
</thead>
</table>

**SECTION 12: Ecological information**

12.1 **Toxicity**

| 2',4'-dimethylacetoacetanilide (97-36-9) | LC50 fish 1 250 (250 - 350) mg/l |

12.2 **Persistence and degradability**

| 2',4'-dimethylacetoacetanilide (97-36-9) | Biodegradation 25 % 28 d |

**Carbon black (1333-86-4)**

| Persistence and degradability | Not readily biodegradable. |

12.3 **Bioaccumulative potential**

| 2',4'-dimethylacetoacetanilide (97-36-9) | Log Pow 1.4 |

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**

<table>
<thead>
<tr>
<th>Sewage disposal recommendations</th>
<th>Do not dispose of waste into sewer.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste disposal recommendations</td>
<td>Dispose in a safe manner in accordance with local/national regulations.</td>
</tr>
</tbody>
</table>

**SECTION 14: Transport information**

In accordance with DOT and TDG

Not considered a dangerous good for transport regulations

<table>
<thead>
<tr>
<th>Proper Shipping Name (ADR)</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport hazard class(es) (ADR)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport by sea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport hazard class(es) (IMDG)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Air transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport hazard class(es) (IATA)</td>
</tr>
</tbody>
</table>
### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Chemical</th>
<th>TSCA</th>
<th>Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>2',4'-dimethylacetoacetanilide (97-36-9)</td>
<td>Listed</td>
<td>United States TSCA (Toxic Substances Control Act)</td>
</tr>
<tr>
<td>butyl 4-hydroxybenzoate (94-26-8)</td>
<td>Listed</td>
<td>United States TSCA (Toxic Substances Control Act)</td>
</tr>
<tr>
<td>Carbon black (1333-86-4)</td>
<td>Listed</td>
<td>United States TSCA (Toxic Substances Control Act)</td>
</tr>
</tbody>
</table>

#### 15.2. International regulations

##### CANADA

<table>
<thead>
<tr>
<th>Chemical</th>
<th>DSL</th>
<th>Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>2',4'-dimethylacetoacetanilide (97-36-9)</td>
<td>Listed</td>
<td>Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL)</td>
</tr>
<tr>
<td>butyl 4-hydroxybenzoate (94-26-8)</td>
<td>Listed</td>
<td>Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL)</td>
</tr>
<tr>
<td>Carbon black (1333-86-4)</td>
<td>Listed</td>
<td>Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL)</td>
</tr>
</tbody>
</table>

##### EU-Regulations

<table>
<thead>
<tr>
<th>Chemical</th>
<th>EINECS</th>
<th>Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>2',4'-dimethylacetoacetanilide (97-36-9)</td>
<td>Listed</td>
<td>EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
<tr>
<td>butyl 4-hydroxybenzoate (94-26-8)</td>
<td>Listed</td>
<td>EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
<tr>
<td>Carbon black (1333-86-4)</td>
<td>Listed</td>
<td>EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
</tbody>
</table>

##### National regulations

#### 15.3. US State regulations

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Proposition 65</th>
<th>Carcinogens List</th>
<th>Developmental Toxicity</th>
<th>Reproductive Toxicity - Female</th>
<th>Reproductive Toxicity - Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (1333-86-4)</td>
<td>Yes</td>
<td>U.S. - California - Proposition 65 - Carcinogens List</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### SECTION 16: Other information

<table>
<thead>
<tr>
<th>Indication of changes</th>
<th>Added product</th>
</tr>
</thead>
</table>
Tempilstik® 185 °F (85 °C), 188 °F (87 °C), 250 °F (121 °C), 425 °F (218 °C), 428 °F (220 °C), 1250 °F (677 °C), 248 °F (120 °C)

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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:
- 1 - Exposure could cause irritation but only minor residual injury even if no treatment 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>Acute Tox. 4 (Oral)</th>
<th>Acute toxicity (oral), Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carc. 2</td>
<td>Carcinogenicity, Category 2</td>
</tr>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation, Category 2A</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer</td>
</tr>
</tbody>
</table>

SDS Prepared by: The Redstone Group, LLC
6077 Frantz Rd.
Suite 206
Dublin, OH USA 43016
T 614-323-7472
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.