

# Thermomelt® HEAT-STIK Markers 119 °F (48 °C), 1800 °F (982 °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: 03/11/2015  
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 Markers 119 °F (48 °C), 1800 °F (982 °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

Emergency number : 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification in accordance with the Globally Harmonized Standard

Aquatic Acute 1 H400  
Aquatic Chronic 1 H410  
Full text of H-phrases: see section 16

### 2.2. Label elements

#### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS09

Signal word (GHS-US) : Warning  
Hazard statements (GHS-US) : H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects  
Precautionary statements (GHS-US) : P273 - Avoid release to the environment  
P391 - Collect spillage  
P501 - Dispose of contents/container to an authorised waste collection point

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	% (w/w)	GHS-US classification
triphenyl phosphate	(CAS No) 115-86-6	90.91 in 119 °F	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Boron zinc hydroxide oxide	(CAS No) 138265-88-0	91.74 - 92.86 in 1800 °F	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

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### 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 you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Wash skin with mild soap and water.
- First-aid measures after eye contact : If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- First-aid measures after ingestion : Do not give any liquid to the person. Call a POISON CENTER or doctor/physician if you feel unwell.

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

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

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

All treatments should be based on observed signs and symptoms of distress in the patient.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : No specific fire or explosion hazard.
- Reactivity : No dangerous reactions known.

#### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self contained breathing apparatus.

### SECTION 6: Accidental release measures

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

- General measures : Avoid contact with skin and eyes. Avoid creating or spreading dust.

##### 6.1.1. For non-emergency personnel

- Protective equipment : In case of inadequate ventilation wear respiratory protection.
- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Where excessive dust may result, use approved respiratory protection equipment.
- Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Avoid release to the environment. Do not discharge into drains or the environment. Prevent entry to sewers and public waters. Prevent dispersion. Notify authorities if liquid enters sewers or public waters. This product contains hazardous components for the aquatic environment.

#### 6.3. Methods and material for containment and cleaning up

- For containment : Contain and collect as any solid. Avoid generating dust.
- Methods for cleaning up : Take up in non-combustible absorbent material and shove into container for disposal. Minimize generation of dust.

#### 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 : Avoid contact with skin and eyes.

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Hygiene measures : 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 : Store in a dry, cool and well-ventilated place.  
Incompatible products : Strong acids. Strong oxidizers. Strong bases.

### 7.3. Specific end use(s)

Temperature indicator.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Thermomelt® HEAT-STIK Markers 119 °F (48 °C), 1800 °F (982 °C)		
ACGIH	Not applicable	
OSHA	Not applicable	
triphenyl phosphate (115-86-6)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
ACGIH	Remark (ACGIH)	Cholinesterase inhib
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Boron zinc hydroxide oxide (138265-88-0)		
ACGIH	Not applicable	
OSHA	Not applicable	

### 8.2. Exposure controls

Appropriate engineering controls : Avoid dispersal of dust in the air (ie, clearing dust surfaces with compressed air). Either local exhaust or general room ventilation is usually required.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : It is a good industrial hygiene practice to minimize skin contact. If dust is formed: Use rubber gloves.

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

Respiratory protection : Where excessive dust may result, use approved respiratory protection equipment. Use air-purifying respirator equipped with particulate filtering cartridges.

Thermal hazard protection : Flame retardant clothing should be used when handling in molten state.

## 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 : white. Green.

Odour : odourless.

Odour threshold : No data available

pH : No data available

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

Melting point : Varies per product

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 : > 1

Solubility : insoluble in water.

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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 at ambient temperature and under normal conditions of use.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Avoid creating or spreading dust. Contact with incompatible materials.

### 10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Strong acids.

### 10.6. Hazardous decomposition products

Burning produces irritating, toxic and noxious fumes.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

triphenyl phosphate (115-86-6)	
LD50 oral rat	> 20000 mg/kg
LD50 dermal rabbit	> 10000 mg/kg
LC50 inhalation rat (mg/l)	> 200 mg/l 1 h

Boron zinc hydroxide oxide (138265-88-0)	
LD50 oral rat	> 10000 mg/kg
LD50 dermal rabbit	> 10000 mg/l
LC50 inhalation rat (mg/l)	> 5 mg/l

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

triphenyl phosphate (115-86-6)	
NOAEL (subacute, oral, animal/male, 28 days)	250 mg/kg bodyweight
NOAEL (subacute, oral, animal/female, 28 days)	4000 mg/kg bodyweight

Aspiration hazard : Not classified

### Potential adverse human health effects and symptoms

Likely routes of exposure : Skin and eye contact;Inhalation

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### SECTION 12: Ecological information

#### 12.1 Toxicity

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

triphenyl phosphate (115-86-6)	
LC50 fish 1	0.4 mg/l 96 h
EC50 Daphnia 1	0.18 (0.18 - 0.32) mg/l 96 h
LOEC (chronic)	0.931 mg/l 21 days
NOEC (chronic)	0.254 mg/l 21 days

#### 12.2. Persistence and degradability

Thermomelt® HEAT-STIK Markers 119 °F (48 °C), 1800 °F (982 °C)	
Persistence and degradability	May cause long-term adverse effects in the environment.

triphenyl phosphate (115-86-6)	
Persistence and degradability	Readily biodegradable.
Biodegradation	83 - 94 % 28 d

Boron zinc hydroxide oxide (138265-88-0)	
Persistence and degradability	Moderately biodegradable.

#### 12.3. Bioaccumulative potential

triphenyl phosphate (115-86-6)	
Log Pow	4.63

Boron zinc hydroxide oxide (138265-88-0)	
Log Pow	0.2
Bioaccumulative potential	Not expected to bioaccumulate.

#### 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.  
Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

In accordance with DOT and TDG

Transport document description : 119 °F = UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (triphenyl phosphate), 9, III, (E)  
1800 °F = UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Boron zinc hydroxide oxide), 9, III, (E)

UN-No.(DOT) : UN3077

Proper Shipping Name (DOT) : 119 °F = ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (triphenyl phosphate)  
1800 °F = ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Boron zinc hydroxide oxide)

Department of Transportation (DOT) Hazard Classes : 9 - Class 9 (Miscellaneous dangerous materials)

Packing group (DOT) : III - Minor Danger

#### ADR

Transport document description : 119 °F = UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (triphenyl phosphate), 9, III, (E)  
1800 °F = UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Boron zinc hydroxide oxide), 9, III, (E)

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Proper Shipping Name (ADR) : 119 °F = ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (triphenyl phosphate)  
1800 °F = ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Boron zinc hydroxide oxide)

Packing group (ADR) : III

Class (ADR) : 9 - Miscellaneous dangerous substances and articles

### Transport by sea

UN-No. (IMDG) : UN 3077

Proper Shipping Name (IMDG) : 119 °F = ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (triphenyl phosphate)  
1800 °F = ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Boron zinc hydroxide oxide)

Class (IMDG) : 9 - Miscellaneous dangerous substances and articles

Packing group (IMDG) : III

### Air transport

UN-No.(IATA) : UN 3077

Proper Shipping Name (IATA) : 119 °F = ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (triphenyl phosphate)  
1800 °F = ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Boron zinc hydroxide oxide)

Class (IATA) : 9 - Miscellaneous Dangerous Goods

Packing group (IATA) : III

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### triphenyl phosphate (115-86-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Boron zinc hydroxide oxide (138265-88-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313

RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
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### 15.2. International regulations

#### CANADA

#### triphenyl phosphate (115-86-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### Boron zinc hydroxide oxide (138265-88-0)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### EU-Regulations

#### triphenyl phosphate (115-86-6)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Boron zinc hydroxide oxide (138265-88-0)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### National regulations

#### Thermomelt® HEAT-STIK Markers 119 °F (48 °C), 1800 °F (982 °C)

All components are listed on the EEC inventory European Inventory of Existing Commercial Chemical Substances (EINECS).

All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

All ingredients are listed in the Toxic Substances Control Act (TSCA).

### 15.3. US State regulations

#### triphenyl phosphate (115-86-6)

U.S. - New Jersey - Right to Know Hazardous Substance List

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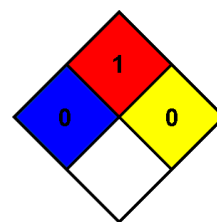
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### Boron zinc hydroxide oxide (138265-88-0)

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

- Indication of changes : Original Document.
- Data sources : ACGIH 2000.  
Canadian Centre for Occupational Health and Safety. Accessed at:  
[http://www.ccohs.ca/oshanswers/legisl/whmis\\_classifi.html](http://www.ccohs.ca/oshanswers/legisl/whmis_classifi.html).  
ESIS (European chemical Substances Information System; accessed at:  
<http://esis.jrc.ec.europa.eu/index.php?PGM=cla>.  
European Chemicals Agency (ECHA) Registered Substances list. Accessed at  
<http://echa.europa.eu/>. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to  
Chemical Protective Clothing", Fifth Edition.  
National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th  
edition.  
OSHA 29CFR 1910.1200 Hazard Communication Standard.  
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE  
COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and  
mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending  
Regulation (EC) No 1907/2006.  
TSCA Chemical Substance Inventory. Accessed at  
<http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>.
- Abbreviations and acronyms : ACGIH (American Conference of Government Industrial Hygienists).  
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.  
STEL: Short Term Exposure Limits.  
TSCA: Toxic Substances Control Act.  
TWA: Time Weight Average.
- Other information : None.
- NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard  
beyond that of ordinary combustible materials.
- 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-phrases:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

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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*