

Thermomelt® HEAT-STIK Markers 225 °F (107 °C), 263 °F (128, 130 °C), 363 °F (184 °C), 475 °F (246 °C), 1050 °F (560, 565 °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: 09/22/2014
Revision date: 10/26/2015

Version: 2.0

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 225 °F (107 °C), 263 °F (128, 130 °C), 363 °F (184 °C), 475 °F (246 °C), 1050 °F (560, 565 °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

Eye Irrit. 2A H319

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

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H319 - Causes serious eye irritation
Precautionary statements (GHS-US) : P264 - Wash hands thoroughly after handling
P280 - Wear eye protection, protective gloves
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 - If eye irritation persists: Get medical advice/attention

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
nicotinamide	(CAS No) 98-92-0	95.15 : 263 °F	Eye Irrit. 2A, H319
succinic acid	(CAS No) 110-15-6	95.10 : 363 °F	Eye Irrit. 2A, H319
edetic acid	(CAS No) 60-00-4	89.98 : 475 °F	Eye Irrit. 2A, H319

Thermomelt® HEAT-STIK Markers 225 °F (107 °C), 263 °F (128, 130 °C), 363 °F (184 °C), 475 °F (246 °C), 1050 °F (560, 565 °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)

Name	Product identifier	% (w/w)	GHS-US classification
anthranilamide	(CAS No) 88-68-6	57.12 : 225 °F	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319
sodium carbonate	(CAS No) 497-19-8	44.21 : 1050 °F	Eye Irrit. 2A, H319

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 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 with plenty of soap and water.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Do NOT induce vomiting. 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 skin contact : Repeated or prolonged contact may cause skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.

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 : Chemical goggles or safety glasses.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Chemical goggles or safety glasses.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Do not discharge into drains or the 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.

Thermomelt® HEAT-STIK Markers 225 °F (107 °C), 263 °F (128, 130 °C), 363 °F (184 °C), 475 °F (246 °C), 1050 °F (560, 565 °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)

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.
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 225 °F (107 °C), 263 °F (128, 130 °C), 363 °F (184 °C), 475 °F (246 °C), 1050 °F (560, 565 °C)	
ACGIH	Not applicable
OSHA	Not applicable
succinic acid (110-15-6)	
ACGIH	Not applicable
OSHA	Not applicable
edetic acid (60-00-4)	
ACGIH	Not applicable
OSHA	Not applicable
nicotinamide (98-92-0)	
ACGIH	Not applicable
OSHA	Not applicable
anthranilamide (88-68-6)	
ACGIH	Not applicable
OSHA	Not applicable
sodium carbonate (497-19-8)	
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. In case of repeated or prolonged contact wear gloves. rubber.

Eye protection : Chemical goggles or safety glasses.

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

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

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.

Thermomelt® HEAT-STIK Markers 225 °F (107 °C), 263 °F (128, 130 °C), 363 °F (184 °C), 475 °F (246 °C), 1050 °F (560, 565 °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)

Colour	: Variable.
Odour	: odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: Varies
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 182 °C (263 °F Marker)
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	: 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 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. Thermal decomposition generates : aromatic hydrocarbons. volatile acidic vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

succinic acid (110-15-6)	
LD50 oral rat	2260 mg/kg
LC50 inhalation rat (mg/l)	> 1.306 mg/l/4h No deaths occurred. Limit dose of 5mg/L could not be achieved. 1.306 mg/L was maximum feasible atmosphere concentration.
ATE CLP (oral)	2260.000 mg/kg bodyweight
edetic acid (60-00-4)	
LD50 oral rat	4500 mg/kg
LC50 inhalation rat (mg/l)	30 mg/m ³ LOAEC
ATE CLP (oral)	4500.000 mg/kg bodyweight
nicotinamide (98-92-0)	
LD50 oral rat	> 2500 mg/kg No mortality observed

Thermomelt® HEAT-STIK Markers 225 °F (107 °C), 263 °F (128, 130 °C), 363 °F (184 °C), 475 °F (246 °C), 1050 °F (560, 565 °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)

nicotinamide (98-92-0)	
LD50 dermal rabbit	> 2000 mg/kg No mortality observed
LC50 inhalation rat (mg/l)	> 3.8 mg/l/4h No mortality observed

anthranilamide (88-68-6)	
LD50 oral rat	1150 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
ATE CLP (oral)	1150.000 mg/kg bodyweight

sodium carbonate (497-19-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	>
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	2300 mg/m ³

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

sodium carbonate (497-19-8)	
IARC group	Not listed in carcinogenicity class
National Toxicology Program (NTP) Status	Not listed in carcinogenicity class

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

sodium carbonate (497-19-8)	
LOAEL (inhalation, rat, dust/mist/fume)	70 mg/l/4h

Specific target organ toxicity (repeated exposure)	: Not classified
---	------------------

Aspiration hazard	: Not classified
--------------------------	------------------

Potential adverse human health effects and symptoms

Symptoms/injuries after skin contact	: Repeated or prolonged contact may cause skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Likely routes of exposure	: Skin and eye contact;Inhalation

SECTION 12: Ecological information

12.1 Toxicity

succinic acid (110-15-6)	
LC50 fish 1	> 100 mg/l 96 h
EC50 Daphnia 1	> 100 mg/l 24 h
ErC50 (algae)	> 100 mg/l 72 h

edetic acid (60-00-4)	
LC50 fish 1	41 mg/l 96 h
EC50 Daphnia 1	625 mg/l 24 h

nicotinamide (98-92-0)	
LC50 fish 1	> 1000 mg/l 96 h
EC50 Daphnia 1	1000 mg/l 24 h

sodium carbonate (497-19-8)	
LC50 fish 1	300 mg/l Lepomis macrochirus
EC50 Daphnia 1	200 - 227 g/l

12.2. Persistence and degradability

succinic acid (110-15-6)	
Persistence and degradability	Readily biodegradable.
Biodegradation	95.9 % 14 d

edetic acid (60-00-4)	
Persistence and degradability	Readily biodegradable.

Thermomelt® HEAT-STIK Markers 225 °F (107 °C), 263 °F (128, 130 °C), 363 °F (184 °C), 475 °F (246 °C), 1050 °F (560, 565 °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)

nicotinamide (98-92-0)	
Persistence and degradability	Readily biodegradable.
Biodegradation	96 % 14 d

12.3. Bioaccumulative potential

succinic acid (110-15-6)	
Log Pow	-0.59

edetic acid (60-00-4)	
BCF fish 1	1.1 28 d
Log Pow	-3.34

nicotinamide (98-92-0)	
Log Pow	-0.38

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

Not considered a dangerous good for transport regulations

Proper Shipping Name (ADR) : Not applicable

Transport hazard class(es) (ADR) :

Transport by sea

Transport hazard class(es) (IMDG) :

Air transport

Transport hazard class(es) (IATA) :

SECTION 15: Regulatory information

15.1. US Federal regulations

succinic acid (110-15-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

edetic acid (60-00-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

nicotinamide (98-92-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

anthranilamide (88-68-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

sodium carbonate (497-19-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

succinic acid (110-15-6)
Listed on the Canadian DSL (Domestic Substances List) inventory.

edetic acid (60-00-4)
Listed on the Canadian DSL (Domestic Substances List) inventory.

nicotinamide (98-92-0)
Listed on the Canadian DSL (Domestic Substances List) inventory.

Thermomelt® HEAT-STIK Markers 225 °F (107 °C), 263 °F (128, 130 °C), 363 °F (184 °C), 475 °F (246 °C), 1050 °F (560, 565 °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)

anthranilamide (88-68-6)

Listed on the Canadian NDSL (Non-Domestic Substances List)

sodium carbonate (497-19-8)

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

EU-Regulations

succinic acid (110-15-6)

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

edetic acid (60-00-4)

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

nicotinamide (98-92-0)

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

anthranilamide (88-68-6)

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

sodium carbonate (497-19-8)

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

National regulations

Thermomelt® HEAT-STIK Markers 225 °F (107 °C), 263 °F (128, 130 °C), 363 °F (184 °C), 475 °F (246 °C), 1050 °F (560, 565 °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

edetic acid (60-00-4)

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

U.S. - New York - Right to Know List of Hazardous Chemicals

SECTION 16: Other information

Indication of changes

: Added. Product.

Data sources

: ACGIH 2000.

Canadian Centre for Occupational Health and Safety. Accessed at:
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.

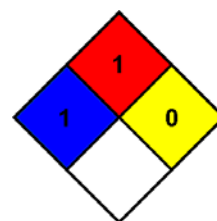
TSCA Chemical Substance Inventory. Accessed at
<http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>.

Thermomelt® HEAT-STIK Markers 225 °F (107 °C), 263 °F (128, 130 °C), 363 °F (184 °C), 475 °F (246 °C), 1050 °F (560, 565 °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)

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	: 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:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
H302	Harmful if swallowed
H319	Causes serious eye irritation

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