

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 Regulation (EU) 2015/830

Date of issue: 22/09/2014

Revision date: 26/10/2015

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 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

1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use
Use of the substance/mixture : Temperature indicator

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LA-CO Industries Europe S.A.S.
Parc Industriel de la Plaine de
l'Ain - Allée des Combes.
01150.BLYES.France.
Phone: +33 (0)4 74 46 23 23
Fax: +33 (0)4 74 46 23 29
E-mail: info@eu.laco.com
Web: http://www.markal.com



1.4. Emergency telephone number

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

EU Member State	Officieel adviesorgaan	Adres	Noodnummer
AUSTRIA	Vergiftungsinformationszentrale (Poisons Information Centre)	Allgemeines Krankenhaus Waehringer Geurtel 18-20 1090 Wien	+43 1 406 43 43
BELARUS	The Belarus Republican Poisons Centre	Kizhevatova str. 58 Minsk 220115	+375 (0)17 201 9158
BELGIUM	Centre Anti-Poisons/Antigifocentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn 1 B -1120 Bruxelles/Brussel	+32 70 245 245
BULGARIA	Национален токсикологичен информационен център National Clinical Toxicology Centre, Emergency Medical Institute "Pirogov"	21 Totleben Boulevard 1606 SOFIA	+359 2 9154 409
CROATIA	Poisons Control Centre Institute of Medical Research & Occupational Health	Ksaverska Cesta 2 P.O. Box 291 HR-10000 Zagreb	+385 1 234 8342
CZECH REPUBLIC	Toxikologické informační středisko Clinic For Occupational Medicine, 1st Medical Faculty, Charles University	Na Bojišti 1 120 00 Praha 2	+42 2 2491 9293 +42 2 2491 5402
DENMARK	Giftlinjen Bispebjerg Hospital	Bispebjerg Bakke 23, 60, 1 DK-2400 København NV	+45 82 12 12 12 +45 35 31 55 55
ESTONIA	Mürgistusteabekeskus	Gonsiori 29 15027 Tallinn	+372 626 93 90
FINLAND	Myrkytystietokeskus	P.O.B 340 (Haartmaninkatu 4) HUS SF - 00029 Helsinki	+358 9 471 977
FRANCE	ORFILA		+33 1 45 42 59 59
GERMANY	Berliner Betrieb für Zentrale Gesundheitliche Aufgaben	Oranienburger Strasse 285 13437 Berlin	+49 30 19240
GERMANY	Informations und Beratungszentrum für Vergiftungsfälle	Kirrberger Straße, Gebäude 9 D-66421 Homburg/Saar	+49 6841 19240
GERMANY	Beratungstelle bei Vergiftungen, Klinische Toxikologie und Beratungsstelle bei Vergiftungen	Langenbeckstrasse 1 55131 Mainz	+49 6131 19240
GREECE	Poisons Information Centre	11527 Athens	+30 10 779 3777
HUNGARY	Országos Kémiai Biztonsági Intézet (National Institute of Chemical Safety) Egészségügyi Toxikológiai Tájékoztató Szolgálat (Health Toxicological Information Service)	1437 Budapest PO Box 839 1097 Budapest, Nagyvárad tér 2	+36 80 20 11 99

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ICELAND	Eitrunarmiðstöðin	Eitrunarmiðstöðin 108 Reykjavik	+354 543 22 22
IRELAND	National Poisons Information Centre	Beaumont Hospital PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2166
LATVIA	Valsts Toksikoloģijas centra Saindēšanās un zāļu informācijas centrs	2 Hipocrate Street LV 1038 Riga	+371 67 04 24 73
LITHUANIA	Apsinuodijimų kontrolės ir informacijos biuras	Siltnamiu 29 2043 Vilnius	+370 5 236 20 52/+370 687 53 378
MALTA	Medicines & Poisons Info Office	Mater Dei Hospital, Msida MSD 2090 Malta	25450000
NETHERLANDS	Nationaal Vergiftigingen Informatie Centrum National Institute for Public Health and the Environment, NB this service is only available to health professionals	Huispostnummer B.00.118, PO Box 85500 3508 GA Utrecht	+31 30 274 88 88
PORTUGAL	Centro de Informação Antivenenos Instituto Nacional de Emergência Médica (INEM)	Rua Almirante Barroso, 36 1000-013 Lisboa	808 250 143 (for use only in Portugal), +351 21 330 3284
ROMANIA	Biroul pentru Regulamentul Sanitar International si Informare Toxicologica	Str. Dr. Leonte Anastasievici Nr.1-3, Sector 5 50463 Bucuresti	+40 21 318 36 06
SLOVAKIA	Národné toxikologické informačné centrum University Hospital Bratislava	Limbová 5 833 05 Bratislava	+421 2 54 77 4 166
SPAIN	Servicio de Información Toxicológica Instituto Nacional de Toxicología, Departamento de Madrid	Calle Luis Cabrera 9 E-28002 Madrid	+34 91 562 04 20
SWEDEN	Giftinformationscentralen Swedish Poisons Information Centre, Karolinska Hospital	Box 60 500 SE-171 76 Stockholm	+46 8 33 12 31 (International) 112 (National)
SWITZERLAND	Centre Suisse d'Information Toxicologique	Freiestrasse 16 Postfach CH-8028 Zurich	+41 44 251 51 51 (International) 145 (National)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Eye Irrit. 2 H319

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

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H319 - Causes serious eye irritation

Precautionary statements (CLP) :

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

PBT: not yet assessed

vPvB: not yet assessed

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

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3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
nicotinamide	(CAS No) 98-92-0 (EC no) 202-713-4	0 – 98	Eye Irrit. 2, H319
succinic acid	(CAS No) 110-15-6 (EC no) 203-740-4	0 – 98	Eye Irrit. 2, H319
edetic acid	(CAS No) 60-00-4 (EC no) 200-449-4 (EC index no) 607-429-00-8	0 – 90	Eye Irrit. 2, H319
anthranilamide	(CAS No) 88-68-6 (EC no) 201-851-2	0 – 60	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
Potassium chloride	(CAS No) 7447-40-7 (EC no) 231-211-8	0 – 50	Not classified
sodium carbonate	(CAS No) 497-19-8 (EC no) 207-838-8 (EC index no) 011-005-00-2	0 – 50	Eye Irrit. 2, H319
limestone	(CAS No) 1317-65-3 (EC no) 215-279-6	0 – 30	Not classified
Iron oxide red	(CAS No) 1309-37-1 (EC no) 215-168-2	0 – 0.1	Aquatic Chronic 2, H411
calcium carbonate	(CAS No) 471-34-1 (EC no) 207-439-9	0 – 0.1	Not classified
Silicon dioxide (amorphous)	(CAS No) 7631-86-9 (EC no) 231-545-4	0 – 0.1	Not classified

Full text of R- and 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.
- Hazardous decomposition products in case of fire : Burning produces irritating, toxic and noxious fumes.

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. EN469.

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.

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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.

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

nicotinamide (98-92-0)		
Lithuania	IPRV (mg/m ³)	1 mg/m ³
limestone (1317-65-3)		
Belgium	Remark (BE)	(carbonate de)
Hungary	Megjegyzések (HU)	inhalable aerosol
Ireland	OEL (8 hours ref) (mg/m ³)	10 mg/m ³ total inhalable dust 4 mg/m ³ respirable dust
Spain	VLA-ED (mg/m ³)	10 mg/m ³
Spain	Notes	inhalable aerosol
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ (total dust) 4 mg/m ³ (respirable dust)
Switzerland	Remark (CH)	(respirable aerosol)
calcium carbonate (471-34-1)		
France	VME (mg/m ³)	10 mg/m ³
France	Note (FR)	inhalable aerosol
Hungary	AK-érték	10 mg/m ³
Hungary	Megjegyzések (HU)	inhalable aerosol
Poland	NDS (mg/m ³)	10 mg/m ³
Poland	Remark (PL)	pyly
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ inhalable aerosol 4 mg/m ³ respirable aerosol
Switzerland	VME (mg/m ³)	3 mg/m ³
Switzerland	Remark (CH)	(respirable aerosol)
Potassium chloride (7447-40-7)		
Lithuania	IPRV (mg/m ³)	5 mg/m ³
Iron oxide red (1309-37-1)		
Belgium	Remark (BE)	(trioxyde de; fumées, en Fe)
Denmark	Grænseværdie (kortvarig) (mg/m ³)	7 mg/m ³

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Iron oxide red (1309-37-1)		
Denmark	Anmærkninger (DK)	(Jernoxid, total dust)
Finland	Huomautus (FI)	(Fe)
Hungary	Megjegyzések (HU)	(respirábilis por)
Ireland	OEL (8 hours ref) (mg/m ³)	5 mg/m ³ (Iron oxide, fume as Fe) 10 mg/m ³ (Rouge total inhalable dust) 4 mg/m ³ (Rouge total respirable dust)
Ireland	OEL (15 min ref) (mg/m ³)	10 mg/m ³ (Iron oxide, fume as Fe)
Lithuania	Remark (LT)	(Piūrėk IX skyriaus 3 pastabà.)
Poland	Remark (PL)	(dymy)
Slovakia	NPHV (priemerná) (mg/m ³)	1.5 mg/m ³ (respirabilná frakcia) 4 mg/m ³ (inhalovateľná frakcia)
Spain	Notes	(Óxido de hierro(III) (polvo y humos), como Fe)
Sweden	Anmärkning (SE)	(Järnoxid, respirabelt damm)
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ (Rouge, inhalable fraction) 4 mg/m ³ (Rouge, respirable fraction) 5 mg/m ³ (fume, as Fe)
United Kingdom	WEL STEL (mg/m ³)	10 mg/m ³ (fume, as Fe)
Norway	Merknader (NO)	(Jern(III)oksid, beregnet som Fe)
Switzerland	Remark (CH)	(alveolengängiger Staub)
Silicon dioxide (amorphous) (7631-86-9)		
Austria	MAK (mg/m ³)	4 mg/m ³
Austria	Remark (AT)	(einatembare Fraktion)
Finland	HTP-arvo (8h) (mg/m ³)	5 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	4 mg/m ³
Germany	Remark (TRGS 900)	(einatembare Fraktion)
Ireland	OEL (8 hours ref) (mg/m ³)	2.4 mg/m ³ 6 mg/m ³ (total inhalable dust)
Spain	VLA-ED (mg/m ³)	10 mg/m ³
Spain	Notes	(respirable aerosol)
United Kingdom	WEL TWA (mg/m ³)	6 mg/m ³ (inhalable aerosol) 2.4 mg/m ³ (respirable aerosol)
Switzerland	VME (mg/m ³)	4 mg/m ³
Switzerland	Remark (CH)	(einatembarer Staub)

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. EN 374.
Eye protection	: Chemical goggles or safety glasses. EN 166.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection. Use air-purifying respirator equipped with particulate filtering cartridges. EN 12083.
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.
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

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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
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 (Based on available data, the classification criteria are not met)

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
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

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limestone (1317-65-3)	
LD50 oral rat	6450 mg/kg
ATE CLP (oral)	6450.000 mg/kg bodyweight
Potassium chloride (7447-40-7)	
LD50 oral rat	3020 mg/kg
ATE CLP (oral)	3020.000 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
Iron oxide red (1309-37-1)	
LD50 oral rat	> 10000 mg/kg
Silicon dioxide (amorphous) (7631-86-9)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 58.8 mg/l/4h
calcium carbonate (471-34-1)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 3 mg/l/4h

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity (single exposure)	: Not classified (Based on available data, the classification criteria are not met)

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

Specific target organ toxicity (repeated exposure)	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

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
limestone (1317-65-3)	
LC50 fish 1	> 200 mg/l
Potassium chloride (7447-40-7)	
LC50 fish 1	880 mg/l Pimephales promelas 96 hr
EC50 Daphnia 1	440 - 880 48 hr
ErC50 (algae)	> 100 mg/l
NOEC (chronic)	500 mg/l 7 day

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sodium carbonate (497-19-8)	
LC50 fish 1	300 mg/l <i>Lepomis macrochirus</i>
EC50 <i>Daphnia</i> 1	200 - 227 g/l
Iron oxide red (1309-37-1)	
EC50 <i>Daphnia</i> 1	> 100 mg/l
Silicon dioxide (amorphous) (7631-86-9)	
LC50 fish 1	> 10000 mg/l
EC50 <i>Daphnia</i> 1	> 1000 mg/l
calcium carbonate (471-34-1)	
LC50 fish 1	> 100 % v/v, 96 h
EC50 <i>Daphnia</i> 1	> 100 % v/v, 48 h

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.
nicotinamide (98-92-0)	
Persistence and degradability	Readily biodegradable.
Biodegradation	96 % 14 d
limestone (1317-65-3)	
Persistence and degradability	Not readily biodegradable.
Silicon dioxide (amorphous) (7631-86-9)	
Persistence and degradability	Product persists.

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
limestone (1317-65-3)	
Bioaccumulative potential	Does not bioaccumulate significantly.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

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PBT: not yet assessed	
vPvB: not yet assessed	
Component	
Potassium chloride (7447-40-7)	PBT: not relevant – no registration required vPvB: not relevant – no registration required

12.6. 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.
European List of Waste (LoW) code	: For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

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H code : H4 - 'Irritant': non-corrosive substances and preparations which, through immediate, prolonged or repeated contact with the skin or mucous membrane, can cause inflammation.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not considered a dangerous good for transport regulations

14.2. UN proper shipping name

Proper Shipping Name (ADR) :

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Inland waterway transport

Carriage prohibited (ADN) : No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

VOC content : 0 %

15.1.2. National regulations

Germany

Water hazard class (WGK) : 1 - low hazard to waters

WGK remark : Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

according to Regulation (EU) 2015/830

Indication of changes:

Added. Product.

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

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 Regulation (EU) 2015/830

	OSHA: Occupational Safety & Health Administration
	PBT: Persistent, Bioaccumulative, Toxic
	PNEC: Predicted No Effect Level
	STEL: Short Term Exposure Limits
	TSCA: Toxic Substances Control Act
	TWA: Time Weighted Average

Data sources

: ACGIH 2000.

Canadian Centre for Occupational Health and Safety. Accessed at:
http://www.ccohs.ca/oshanswers/legis/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>.

Other information

: None.

Full text of R-, H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed
H319	Causes serious eye irritation
H411	Toxic to aquatic life with long lasting effects
R22	Harmful if swallowed
R36	Irritating to eyes
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
N	Dangerous for the environment
Xi	Irritant
Xn	Harmful

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Eye Irrit. 2	H319	Calculation method
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LA-CO EU CLP SDS

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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