

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
 Product name. : Thermomelt® HEAT-STIK Marker 700 °F (371 °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 220115 Minsk	+375 (0)17 201 9158
BELGIUM	Centre Anti-Poisons/Antigifcentrum 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 Tottleben 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
ICELAND	Eitrunarmiðstöðin	Eitrunarmiðstöðin 108 Reykjavik	+354 543 22 22

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## Safety Data Sheet

according to Regulation (EC) No. 453/2010

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]

Resp. Sens. 1 H334  
Skin Sens. 1 H317  
Muta. 2 H341  
Carc. 1A H350  
Repr. 1B H360  
Aquatic Acute 1 H400  
Aquatic Chronic 1 H410

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.1; R49  
Muta.Cat.3; R68  
Repr.Cat.2; R60  
Xn; 22  
Xn; R48/20  
R42  
R43  
N; R50/53

Full text of R-phrases: see section 16

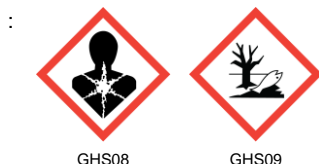
#### Adverse physicochemical, human health and environmental effects

No additional information available

### 2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger.

Hazardous ingredients

: cobalt sulphate, nickel sulphate

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Hazard statements (CLP)	: 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 H410 - Very toxic to aquatic life with long lasting effects
Precautionary statements (CLP)	: P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P261 - Avoid breathing dust/fume P272 - Contaminated work clothing should not be allowed out of the workplace P273 - Avoid release to the environment P280 - Wear protective gloves/protective clothing/eye protection/face protection P284 - Wear respiratory protection P302+P352 - IF ON SKIN: Wash with plenty of water P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing P314 - Get medical advice/attention if you feel unwell P321 - Specific treatment (see Section 4 on this label) P333+P313 - If skin irritation or rash occurs: Get medical advice/attention P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER/doctor P362+P364 - Take off contaminated clothing and wash it before reuse P391 - Collect spillage P405 - Store locked up P501 - Dispose of contents/container in accordance with local and national regulations

### 2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixture

Components with health hazards present above the applicable thresholds or with Exposure Limit values are shown. Exact composition withheld as trade secret.

Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
cobalt sulphate substance listed as REACH Candidate (Cobalt(II) sulphate)	(CAS No) 10124-43-3 (EC no) 233-334-2 (EC index no) 027-005-00-0	30 – 40	Carc.Cat.2; R49 Muta.Cat.3; R68 Repr.Cat.2; R60 Xn; R22 R42 R43 N; R50/53	Acute Tox. 4 (Oral), H302 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350i Repr. 1B, H360F Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)
Sodium chloride	(CAS No) 7647-14-5 (EC no) 231-598-3	25 – 35	Not classified	Not classified
Potassium chloride	(CAS No) 7447-40-7 (EC no) 231-211-8	10 – 20	Not classified	Not classified
nickel sulphate	(CAS No) 7786-81-4 (EC no) 232-104-9 (EC index no) 028-009-00-5	< 1	Carc.Cat.1; R49 Muta.Cat.3; R68 Repr.Cat.2; R61 T; R48/23 Xn; R20/22 Xi; R38 R42 R43 N; R50/53	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1A, H350i Repr. 1B, H360D STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Name	Product identifier	Specific concentration limits
cobalt sulphate	(CAS No) 10124-43-3 (EC no) 233-334-2 (EC index no) 027-005-00-0	(0.01 =< C) Carc. Cat. 2;R49 (0.025 =< C < 0.25) R52-53 (0.25 =< C < 2.5) N;R51/53 (2.5 =< C) N;R50/53 (0.01 =< C) Carc. 1B, H350i
nickel sulphate	(CAS No) 7786-81-4 (EC no) 232-104-9 (EC index no) 028-009-00-5	(0.01 =< C) R43 (0.1 =< C < 1) Xn;R48/20 (0.25 =< C < 2.5) R52/53 (1 =< C) T;R48/23 (2.5 =< C < 25) N;R51/53 (20 =< C) Xi;R38 (25 =< C) N;R50/53 (0.01 =< C) Skin Sens. 1, H317 (0.1 =< C < 1) STOT RE 2, H373 (1 =< C) STOT RE 1, H372 (20 =< C) Skin Irrit. 2, H315

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Full text of R-, H- and EUH-phrases: 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. Call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- 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 induce vomiting. Call a POISON CENTER/doctor/physician if you feel unwell.

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

- Symptoms/injuries : Suspected of causing genetic defects. May damage fertility or the unborn child. Causes 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 eye contact : Direct contact with the eyes is likely irritating.
- Symptoms/injuries after ingestion : Like any product not designed to be ingested, this product may cause stomach distress if ingested in large quantities.
- Chronic symptoms : May cause cancer. May damage fertility. May damage the unborn child. May cause damage to organs,

#### 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 : Wear suitable gloves resistant to chemical penetration. Wear heat resistant protected gloves and clothing to withstand the temperature of the molten product. Wear chemical goggles if material is handled hot.
- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Wear suitable gloves. Dust impervious gloves. 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. Prevent entry to sewers and public waters. 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.

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### 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 breathing dust/fumes. 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 : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container closed when not in use.

Incompatible products : Strong acids. Strong oxidizers. Strong bases.

Storage area : Keep out of direct sunlight.

### 7.3. Specific end use(s)

Temperature indicator.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

cobalt sulphate (10124-43-3)		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup> Cobalt and inorganic compounds, as Co
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Notations A3, BEI. MW Varies.
Finland	Local name	Koboltti-(II)-sulfaatti
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
Finland	Huomautus (FI)	(Co)
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Sweden	Anmärkning (SE)	C, S
Croatia	Local name	Kobaltov sulfat (kao Co)
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Croatia	Naznake (HR)	T, N

nickel sulphate (7786-81-4)		
France	Local name	Nickel (sulfate de),en Ni
France	VME (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Spain	Local name	Sulfato de níquel, como Ni
Spain	VLA-ED (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Spain	Notes	(Sulfato de níquel, como Ni; C1A,Sen,r,TR1B)
Finland	Local name	Nikkeli-(II)-sulfaatti
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Finland	Huomautus (FI)	Ni

Potassium chloride (7447-40-7)		
Bulgaria	Local name	Калиев хлорид
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Latvia	Local name	Kālijahlorīds
Latvia	OEL TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Lithuania	Local name	Kalio chloridas
Lithuania	IPRV (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>

Sodium chloride (7647-14-5)		
Latvia	Local name	Nātrijahlorīds
Latvia	OEL TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Lithuania	Local name	Natrio chloridas
Lithuania	IPRV (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>

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### 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	: Wear thermal protective gloves when working around hot surfaces. Wear suitable gloves resistant to chemical penetration. Dust impervious gloves. EN 374.
Eye protection	: In case of dust production: protective goggles. EN 166.
Skin and body protection	: Wear suitable protective clothing. Impervious clothing. EN 702.
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.
Environmental exposure controls	: Prevent contaminated water run-off.
Consumer exposure controls	: Avoid contact during pregnancy/while nursing.
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	: Violet.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 371.111 °C (700 °F (371 °C))
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self 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	: > 1.5
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
Oxidising properties	: No oxidizing properties.
Explosive limits	: No data available

### 9.2. Other information

VOC content	: 0 %
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## 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.

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

<b>cobalt sulphate (10124-43-3)</b>	
LD50 oral rat	768 mg/kg
LD50 dermal rat	> 2000 mg/kg
ATE (oral)	768.000 mg/kg bodyweight

<b>nickel sulphate (7786-81-4)</b>	
LD50 oral rat	361.9 mg/kg
LC50 inhalation rat (mg/l)	2.48 mg/l/4h
ATE (oral)	361.900 mg/kg bodyweight
ATE (vapours)	2.480 mg/l/4h
ATE (dust,mist)	2.480 mg/l/4h

<b>Potassium chloride (7447-40-7)</b>	
LD50 oral rat	3020 mg/kg
ATE (oral)	3020.000 mg/kg bodyweight

<b>Sodium chloride (7647-14-5)</b>	
LD50 oral rat	3550 mg/kg
LD50 dermal rat	> 10000 mg/kg
LC50 inhalation rat (mg/l)	> 42000 mg/m <sup>3</sup> 1 hour
LC50 inhalation rat (Dust/Mist - mg/l/4h)	10.5 mg/l/4h
ATE (oral)	3550.000 mg/kg bodyweight
ATE (dust,mist)	10.500 mg/l/4h

**Skin corrosion/irritation** : Not classified (Based on available data, the classification criteria are not met)

**Serious eye damage/irritation** : Not classified (Based on available data, the classification criteria are not met)

**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.

<b>nickel sulphate (7786-81-4)</b>	
NOAEL (chronic,oral, animal/male,2 years)	11 mg/kg bodyweight
NOAEL (chronic,oral, animal/female,2 years)	11 mg/kg bodyweight

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

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

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

**Aspiration hazard** : Not classified (Based on available data, the classification criteria are not met)

**Other information** : Likely routes of exposure: inhalation, skin and eye.

## SECTION 12: Ecological information

### 12.1. Toxicity

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

<b>cobalt sulphate (10124-43-3)</b>	
LOEC (chronic)	1.61 mg/l 23% survival
NOEC (chronic)	0.81 mg/l 28 days

<b>nickel sulphate (7786-81-4)</b>	
LC50 fishes 1	15.3 mg/l 96 h, no mortality observed
EC50 Daphnia 1	> 200 µg/l 48 h

<b>Potassium chloride (7447-40-7)</b>	
LC50 fishes 1	880 mg/l Pimephales promelas 96 hr
EC50 Daphnia 1	440 - 880 48 hr
NOEC (chronic)	500 mg/l 7 day



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Sodium chloride (7647-14-5)	
LC50 fishes 1	5840 mg/l 96 hour; Lepomis macrochirus
EC50 Daphnia 1	4136 mg/l 48 h
NOEC (acute)	1500 mg/l Daphnia; 7 d
NOEC chronic fish	252 mg/l 33 day

### 12.2. Persistence and degradability

Thermomelt® HEAT-STIK Marker 700 °F (371 °C)	
Persistence and degradability	May cause long-term adverse effects in the environment.

### 12.3. Bioaccumulative potential

Thermomelt® HEAT-STIK Marker 700 °F (371 °C)	
Bioaccumulative potential	Not established.

cobalt sulphate (10124-43-3)	
Bioaccumulative potential	Not expected to bioaccumulate.

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

Thermomelt® HEAT-STIK Marker 700 °F (371 °C)	
PBT: not yet assessed	
vPvB: not yet assessed	

### 12.6. Other adverse effects

Other adverse effects : Avoid release to the environment.

## 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. Hazardous waste due to toxicity.
EURLW code	: For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used. 01 03 07* - other wastes containing dangerous substances from physical and chemical processing of metalliferous minerals
H code	: H10 - 'Toxic for reproduction': substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce non-hereditary congenital malformations or increase their incidence. H11 - 'Mutagenic': substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce hereditary genetic defects or increase their incidence. H13 - 'Sensitizing': substances and preparations which, if they are inhaled or if they penetrate the skin, are capable of eliciting a reaction of hypersensitization such that on further exposure to the substance or preparation, characteristic adverse effects are produced. H14 - 'Ecotoxic': waste which presents or may present immediate or delayed risks for one or more sectors of the environment. H7 - 'Carcinogenic': substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce cancer or increase its incidence. H5 - 'Harmful': substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may involve limited health risks.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

UN-No.	: 3077
UN-No.(IATA)	: 3077
UN-No. (IMDG)	: 3077
UN-No.(ADN)	: 3077

### 14.2. UN proper shipping name

Proper Shipping Name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (IATA)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (ADN)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.



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## Safety Data Sheet

according to Regulation (EC) No. 453/2010

Transport document description : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (cobalt sulphate), 9, III, (E)

### 14.3. Transport hazard class(es)

Class (UN) : 9  
Classification code (UN) : M7  
Class (IATA) : 9  
Class (IMDG) : 9  
Class (ADN) : 9  
Classification code (ADN) : M7

### 14.4. Packing group

Packing group (UN) : III  
Packing group (IATA) : III  
Packing group (IMDG) : III  
Packing group (ADN) : III

### 14.5. Environmental hazards

Dangerous for the environment :



Other information : No supplementary information available.

### 14.6. Special precautions for user

#### 14.6.1. Overland transport

Hazard identification number (Kemler No.) : 90  
Classification code (UN) : M7  
Orange plates :



Tunnel restriction code : E  
EAC code : 2Z

#### 14.6.2. Transport by sea

EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-F  
Stowage category (IMDG) : A

#### 14.6.3. Air transport

ERG code (IATA) : 9L

#### 14.6.4. 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

No REACH Annex XVII restrictions

Contains REACH Candidate List substance(s): Cobalt(II) sulphate (EC 233-334-2, CAS 10124-43-3)

VOC content : 0 %

#### 15.1.2. National regulations

##### Germany

Water hazard class (WGK) : 3 - strongly hazardous to water

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

Storage class (LGK) : LGK 11 - Combustible solids

# Thermomelt® HEAT-STIK Marker 700 °F (371 °C)

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### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## 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.

PNEC: Predicted No Effect Level.

STEL: Short Term Exposure Limits.

TSCA: Toxic Substances Control Act.

TWA: Time Weight Average.

Other information

: None.

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

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Carc. 1A	Carcinogenicity (inhalation) Category 1A
Carc. 1B	Carcinogenicity (inhalation) Category 1B
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Muta. 2	Germ cell mutagenicity Category 2
Repr. 1B	Reproductive toxicity Category 1B
Resp. Sens. 1	Respiratory sensitisation Category 1
Skin Irrit. 2	skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitisation Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled

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H341	Suspected of causing genetic defects
H350	May cause cancer
H350i	May cause cancer by inhalation
H360	May damage fertility or the unborn child
H360D	May damage the unborn child
H360F	May damage fertility
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
R10	Flammable.
R11	Highly flammable.
R20	Harmful by inhalation.
R20/21	Harmful by inhalation and in contact with skin.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R20/22	Harmful by inhalation and if swallowed.
R22	Harmful if swallowed.
R38	Irritating to skin.
R42	May cause sensitization by inhalation.
R43	May cause sensitisation by skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R49	May cause cancer by inhalation.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R60	May impair fertility.
R61	May cause harm to the unborn child.
R68	Possible risk of irreversible effects.
F	Highly flammable
N	Dangerous for the environment
T	Toxic
Xi	Irritant
Xn	Harmful.

### Thermomelt® HEAT-STIK Marker 700 °F (371 °C) classification:

Resp. Sens. 1	Respiratory sensitisation Category 1	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method
Skin Sens. 1	Skin sensitisation Category 1	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method
Carc. 1A	Carcinogenicity (inhalation) Category 1A	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method
Muta. 2	Germ cell mutagenicity Category 2	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method
Repr. 1B	Reproductive toxicity Category 1B	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method

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LA-CO EU CLP 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.*