

Tempilstik® 488 °F (253 °C), 500 °F (260 °C), 482 °F (250 °C)

Safety Data Sheet

according to Regulation (EU) No. 2015/830

Date of issue: 18/06/2015

Revision date: 30/12/2015

Version: 2.0

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

1.1. Product identifier

Product form : Mixture
Trade name : Tempilstik® 488 °F (253 °C), 500 °F (260 °C), 482 °F (250 °C)

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : 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/Antigifencentrum 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 Tolleben 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	Kirberger 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
IRELAND	National Poisons Information Centre	Beaumont Hospital PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2166

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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	Frelestrasse 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]

Muta. 2 H341

Carc. 1B H350

Repr. 2 H361

Full text of 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)



GHS08

Signal word (CLP)

: Danger

Hazardous ingredients

: Phenolphthalein

Hazard statements (CLP)

: H341 - Suspected of causing genetic defects
H350 - May cause cancer
H361 - Suspected of damaging fertility or the unborn child

Precautionary statements (CLP)

: P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective clothing, protective gloves
P308+P313 - IF exposed or concerned: Get medical advice/attention
P405 - Store locked up
P501 - Dispose of contents/container to an authorised waste collection point

2.3. Other hazards

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]
Phenolphthalein substance listed as REACH Candidate	(CAS No) 77-09-8 (EC no) 201-004-7 (EC index no) 604-076-00-1	90 – 99	Muta. 2, H341 Carc. 1B, H350 Repr. 2, H361f
1,1,1 Tris Ethane	(CAS No) 27955-94-8 (EC no) 405-800-7 (EC index no) 604-048-00-9	0 – 2	Aquatic Chronic 2, H411
Polyethylene Glycol	(CAS No) 25322-68-3 (EC no) 500-038-2	0.1 – 1	Not classified
ammonium iron(3+) hexakis(cyano-C)ferrate(4-)	(CAS No) 25869-00-5 (EC no) 247-304-1	0.1 – 1	Not classified
barium sulfate	(CAS No) 7727-43-7 (EC no) 231-784-4	< 0.1	Not classified
Name	Product identifier	Specific concentration limits	
Phenolphthalein	(CAS No) 77-09-8 (EC no) 201-004-7 (EC index no) 604-076-00-1	(C >= 1) Carc. 1A, H350	

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. Get medical advice/attention if you feel unwell.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Gently wash with plenty of soap and water.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes.
- First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER or 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 cause cancer. Suspected of damaging fertility or the unborn child.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Sand. Water spray.
- Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : No specific fire or explosion hazard. Burning produces irritating, toxic and noxious fumes.
- Hazardous decomposition products in case of fire : Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

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 a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing. EN469.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.1.1. For non-emergency personnel

- Protective equipment : Wear suitable protective clothing and gloves.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Wear suitable protective clothing and gloves.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

- For containment : Avoid generating dust. Contain and collect as any solid.
Methods for cleaning up : Minimize generation of dust. On land, sweep or shovel into suitable containers.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood. Avoid breathing dust, fume.
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 : Keep container tightly closed.
Incompatible products : Strong oxidizers. Strong bases.
Prohibitions on mixed storage : Keep away from incompatible materials.
Storage area : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Temperature indicator.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

barium sulfate (7727-43-7)		
Belgium	Remark (BE)	(sulfate de)
Slovakia	NPHV (priemerná) (mg/m ³)	1.5 mg/m ³ (respirabilná frakcia) 4 mg/m ³ (inhalovateľná frakcia)
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ inhalable aerosol 4 mg/m ³ respirable aerosol
Polyethylene Glycol (25322-68-3)		
Austria	MAK (mg/m ³)	1000 mg/m ³ (einatembare Fraktion)
Austria	MAK Short time value (mg/m ³)	4000 mg/m ³ max. 4x15 min./Schicht (einatembare Fraktion)
Denmark	Grænseværdie (langvarig) (mg/m ³)	1000 mg/m ³
Denmark	Grænseværdie (kortvarig) (mg/m ³)	2000 mg/m ³
Denmark	Anmærkninger (DK)	(Polyethylenglycol (PEG) med middelmolvægt på 200-600)
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	1000 mg/m ³
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	8000 mg/m ³
Germany	Remark (TRGS 900)	(einatembare Fraktion)
Slovakia	NPHV (priemerná) (mg/m ³)	1000 mg/m ³
Slovakia	Upozomenie (SK)	krátkodobý: kategória II.
Switzerland	VME (ppm)	1000 ppm
Switzerland	Remark (CH)	(mittlere Molmasse 200–600)

8.2. Exposure controls

- Appropriate engineering controls : Avoid dispersal of dust in the air (ie, clearing dust surfaces with compressed air). Ensure good ventilation of the work station.
Personal protective equipment : Avoid all unnecessary exposure.
Hand protection : Wear dust impervious gloves. EN374.
Eye protection : In case of dust production: protective goggles. EN166.
Skin and body protection : Long sleeved protective clothing.
Respiratory protection : In case of inadequate ventilation wear respiratory protection. Use air-purifying respirator equipped with particulate filtering cartridges. EN 12083.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
Appearance : A solid crayon-like marker.

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Colour	: Variable.
Odour	: odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
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

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Keep away from incompatible materials. Avoid dust formation.

10.5. Incompatible materials

Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Phenolphthalein (77-09-8)	
LD50 oral rat	> 2000 mg/kg bodyweight
1,1,1 Tris Ethane (27955-94-8)	
LD50 oral rat	> 5000 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight
barium sulfate (7727-43-7)	
LD50 oral rat	307 g/kg
LD50 dermal rat	> 2000 mg/kg
ATE CLP (oral)	307000.000 mg/kg bodyweight
Polyethylene Glycol (25322-68-3)	
LD50 oral rat	47000 mg/kg
LD50 dermal rat	> 20000 mg/kg
ATE CLP (oral)	47000.000 mg/kg bodyweight

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ammonium iron(3+) hexakis(cyano-C)ferrate(4-) (25869-00-5)	
LD50 oral rat	5000 mg/kg
LD50 dermal rat	> 2000 mg/kg
ATE CLP (oral)	5000.000 mg/kg bodyweight
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Suspected of causing genetic defects.
Carcinogenicity	: May cause cancer.

barium sulfate (7727-43-7)	
NOAEL (chronic, oral, animal/male, 2 years)	60 mg/kg bodyweight
NOAEL (chronic, oral, animal/female, 2 years)	75 mg/kg bodyweight
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Phenolphthalein (77-09-8)	
EC50 Daphnia 1	> 100 mg/l
barium sulfate (7727-43-7)	
LC50 fish 1	> 3.5 mg/l 96 h
EC50 Daphnia 1	14500 µg/l 48 h
Polyethylene Glycol (25322-68-3)	
LC50 fish 1	> 100 mg/l
LC50 other aquatic organisms 1	1000 mg/l
ammonium iron(3+) hexakis(cyano-C)ferrate(4-) (25869-00-5)	
LC50 fish 1	> 100 mg/l 96 h
EC50 Daphnia 1	> 500 mg/l 24 h

12.2. Persistence and degradability

1,1,1 Tris Ethane (27955-94-8)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	8 %

12.3. Bioaccumulative potential

Phenolphthalein (77-09-8)	
Log Kow	2.4
1,1,1 Tris Ethane (27955-94-8)	
Log Kow	3.88
barium sulfate (7727-43-7)	
BCF fish 1	68.4 L/kg

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	
Phenolphthalein (77-09-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

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

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 substances with Annex XVII restrictions

Contains substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: Phenolphthalein (EC 201-004-7, CAS 77-09-8)

Contains no REACH Annex XIV substances

VOC content : 0 %

15.1.2. National regulations

Germany

Water hazard class (WGK) : 3 - severe hazard to waters

WGK remark : Classification based on the R-phrases 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) No. 2015/830

Indication of changes:

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Added product

Abbreviations and acronyms:

	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	PBT: Persistent, Bioaccumulative, Toxic
	TWA: Time Weight Average
	TSCA: Toxic Substances Control Act

Data sources : ESIS (European chemical Substances Information System; accessed at: <http://esis.jrc.ec.europa.eu/index.php?PGM=cla>.
European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/quest/information-on-chemicals/cl-inventory-database>.
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.
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.

Other information : None.

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

Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Carc. 1B	Carcinogenicity, Category 1B
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
H341	Suspected of causing genetic defects
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child
H361f	Suspected of damaging fertility
H411	Toxic to aquatic life with long lasting effects
R45	May cause cancer
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R62	Possible risk of impaired fertility
R68	Possible risk of irreversible effects
N	Dangerous for the environment

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

Muta. 2	H341	Calculation method
Carc. 1B	H350	Expert judgment
Repr. 2	H361	Calculation method

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