

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 17/04/2015

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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® 450 °F (232 °C), 446 °F (230 °C), 455 °F (235 °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

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
Aquatic Chronic 2 H411

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) :



GHS08



GHS09

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
H411 - 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
P273 - Avoid release to the environment
P280 - Wear protective clothing, protective gloves
P308+P313 - IF exposed or concerned: Get medical advice/attention
P391 - Collect spillage
P405 - Store locked up
P501 - Dispose of contents/container to an authorised waste collection point

Tempilstik® 450 °F (232 °C), 446 °F (230 °C), 455 °F (235 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,1,1 Tris Ethane	(CAS No) 27955-94-8 (EC no) 405-800-7 (EC index no) 604-048-00-9	80 – 90	Aquatic Chronic 2, H411
Phenolphthalein substance listed as REACH Candidate	(CAS No) 77-09-8 (EC no) 201-004-7 (EC index no) 604-076-00-1	1 – 5	Muta. 2, H341 Carc. 1B, H350 Repr. 2, H361f
Carbon black	(CAS No) 1333-86-4 (EC no) 215-609-9	0 – 1	Carc. 2, H351
barium sulfate	(CAS No) 7727-43-7 (EC no) 231-784-4	0 – 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 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	: 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. Suspected of damaging fertility or the unborn child. May cause cancer.
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4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

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. Mixture of hydrocarbons.

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 contact with skin and eyes. Avoid creating or spreading dust.
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6.1.1. For non-emergency personnel

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

Tempilstik® 450 °F (232 °C), 446 °F (230 °C), 455 °F (235 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

6.1.2. For emergency responders

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

6.2. Environmental precautions

Do not discharge into drains or the environment. Prevent entry to sewers and public waters.

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 dust formation.
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

Carbon black (1333-86-4)		
United Kingdom	Local name	Carbon black
United Kingdom	WEL TWA (mg/m³)	3.5 mg/m³
United Kingdom	WEL STEL (mg/m³)	7 mg/m³
barium sulfate (7727-43-7)		
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ inhalable aerosol 4 mg/m³ respirable aerosol

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 : Dust impervious gloves. Use rubber gloves. EN374.
Eye protection : In case of dust production: protective goggles. EN166.
Skin and body protection : Wear suitable protective clothing. 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.
Colour : No data available
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

Tempilstik® 450 °F (232 °C), 446 °F (230 °C), 455 °F (235 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

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 %
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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 creating or spreading dust.

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
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1,1,1 Tris Ethane (27955-94-8)	
LD50 oral rat	> 5000 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight

Phenolphthalein (77-09-8)	
LD50 oral rat	> 2000 mg/kg bodyweight

Carbon black (1333-86-4)	
LD50 oral rat	> 8000 mg/kg
LC50 inhalation rat (mg/l)	> 4.6 mg/m³ 4 h

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

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.
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Tempilstik® 450 °F (232 °C), 446 °F (230 °C), 455 °F (235 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

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

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

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

12.2. Persistence and degradability

Tempilstik® 450 °F (232 °C), 446 °F (230 °C), 455 °F (235 °C)	
Persistence and degradability	May cause long-term adverse effects in the environment.
1,1,1 Tris Ethane (27955-94-8)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	8 %
Carbon black (1333-86-4)	
Persistence and degradability	Not readily biodegradable.

12.3. Bioaccumulative potential

1,1,1 Tris Ethane (27955-94-8)	
Log Kow	3.88
Phenolphthalein (77-09-8)	
Log Kow	2.4
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

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

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
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

Tempilstik® 450 °F (232 °C), 446 °F (230 °C), 455 °F (235 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

SECTION 14: Transport information

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

14.1. UN number

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

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Environmentally hazardous substance, solid, n.o.s. (1,1,1 Tris Ethane)
Proper Shipping Name (IATA) : Environmentally hazardous substance, solid, n.o.s. (1,1,1 Tris Ethane)
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,1,1 Tris Ethane)
Proper Shipping Name (ADN) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,1,1 Tris Ethane)
Transport document description (ADR) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,1,1 Tris Ethane), 9, III, (E)

14.3. Transport hazard class(es)

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

14.4. Packing group

Packing group (ADR) : 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 (ADR) : M7
Orange plates :



Tunnel restriction code (ADR) : 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. 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

Tempilstik® 450 °F (232 °C), 446 °F (230 °C), 455 °F (235 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

Contains no REACH 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 %

15.2. 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
	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

: 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:

Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Carc. 1B	Carcinogenicity, Category 1B
Carc. 2	Carcinogenicity, Category 2
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
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H361f	Suspected of damaging fertility
H411	Toxic to aquatic life with long lasting effects

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

Muta. 2	H341	Calculation method
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Tempilstik® 450 °F (232 °C), 446 °F (230 °C), 455 °F (235 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

Carc. 1B	H350	Expert judgment
Repr. 2	H361	Calculation method
Aquatic Chronic 2	H411	Calculation method

LA-CO EU CLP SDS United Kingdom

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