

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 06/04/2015

Revision date: 29/12/2015

Version: 3.0

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

Product form : Mixture
Trade name : Tempilstik® 150 °F (66 °C), 158 °F (70 °C), 163 °F (73 °C), 167 °F (75 °C), 169 °F (76 °C), 175 °F (79 °C), 176 °F (80 °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]

Acute Tox. 4 (Oral) H302
Acute Tox. 4 (Dermal) H312
Acute Tox. 4 (Inhalation:dust,mist) H332
STOT RE 2 H373

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) :



Signal word (CLP) : Warning
Hazardous ingredients : acetoacetanilide
Hazard statements (CLP) : H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
Precautionary statements (CLP) : P260 - Do not breathe dust, fume
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves
P301+P312 - If swallowed: Call a poison center or doctor
P302+P352 - IF ON SKIN: Wash with plenty of water

Tempilstik® 150 °F (66 °C), 158 °F (70 °C), 163 °F (73 °C), 167 °F (75 °C), 169 °F (76 °C), 175 °F (79 °C), 176 °F (80 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P312 - Call a poison center or doctor if you feel unwell
P321 - Specific treatment (see First aid measures on this label)
P330 - Rinse mouth
P362+P364 - Take off contaminated clothing and wash it before reuse
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

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
acetoacetanilide	(CAS No) 102-01-2 (EC no) 202-996-4	70 – 90	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 STOT RE 2, H373
butyl 4-hydroxybenzoate	(CAS No) 94-26-8 (EC no) 202-318-7	0 – 7	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Cobalt compound	(CAS No) trade secret	0 – 2	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Carbon black	(CAS No) 1333-86-4 (EC no) 215-609-9	< 0.1	Carc. 2, H351
Cobalt	(CAS No) 7440-48-4 (EC no) 231-158-0 (EC index no) 027-001-00-9	< 0.1	Resp. Sens. 1, H334 Skin Sens. 1, H317 Aquatic Chronic 4, H413
barium sulfate	(CAS No) 7727-43-7 (EC no) 231-784-4	< 0.1	Not classified

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. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Immediately call a POISON CENTER or doctor/physician. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: In case of contact, immediately flush eyes with plenty of water.
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	: May cause damage to organs through prolonged or repeated exposure.
Symptoms/injuries after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

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.

Tempilstik® 150 °F (66 °C), 158 °F (70 °C), 163 °F (73 °C), 167 °F (75 °C), 169 °F (76 °C), 175 °F (79 °C), 176 °F (80 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

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 : Always approach spills or fires from upwind/uphill. Avoid creating or spreading dust. Avoid contact with skin and eyes.

6.1.1. For non-emergency personnel

- Protective equipment : Wear suitable gloves resistant to chemical penetration. In case of inadequate ventilation wear respiratory protection.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Wear suitable gloves resistant to chemical penetration. Where excessive dust may result, use approved respiratory protection equipment.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

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 : Use only outdoors or in a well-ventilated area. Avoid breathing dust, fume.
- Hygiene measures : Do not eat, drink or smoke when using this product. 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)		
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ inhalable aerosol 4 mg/m³ respirable aerosol
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
Cobalt (7440-48-4)		
United Kingdom	WEL TWA (mg/m³)	0.1 mg/m³

Tempilstik® 150 °F (66 °C), 158 °F (70 °C), 163 °F (73 °C), 167 °F (75 °C), 169 °F (76 °C), 175 °F (79 °C), 176 °F (80 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

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. EN 374.
Eye protection	: In case of dust production: protective goggles. EN 166.
Respiratory protection	: Use air-purifying respirator equipped with particulate filtering cartridges. In case of inadequate ventilation wear respiratory protection. EN 12083.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
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 creating or spreading dust.

10.5. Incompatible materials

Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

Tempilstik® 150 °F (66 °C), 158 °F (70 °C), 163 °F (73 °C), 167 °F (75 °C), 169 °F (76 °C), 175 °F (79 °C), 176 °F (80 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation:dust,mist: Harmful if inhaled.

Tempilstik® 150 °F (66 °C), 158 °F (70 °C), 163 °F (73 °C), 167 °F (75 °C), 169 °F (76 °C), 175 °F (79 °C), 176 °F (80 °C)	
ATE CLP (oral)	1278.978 mg/kg bodyweight
ATE CLP (dermal)	1243.922 mg/kg bodyweight
ATE CLP (dust,mist)	1.696 mg/l/4h

acetoacetanilide (102-01-2)	
LD50 oral rat	1131 (1131 - 4650) mg/kg
LD50 dermal	> 1000 mg/kg guinea pig
ATE CLP (oral)	1131.000 mg/kg bodyweight
ATE CLP (dermal)	1100.000 mg/kg bodyweight
ATE CLP (dust,mist)	1.500 mg/l/4h

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

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

butyl 4-hydroxybenzoate (94-26-8)	
LD50 oral rat	13200 mg/kg
ATE CLP (oral)	13200.000 mg/kg bodyweight

Cobalt (7440-48-4)	
LD50 oral rat	7150 mg/kg OECD Guideline 401
LD50 dermal rat	> 2000 mg/kg OECD Guideline 402 as tricobalt tetraoxide
ATE CLP (oral)	7150.000 mg/kg bodyweight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

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 : Not classified

Specific target organ toxicity (single exposure) : Not classified

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

acetoacetanilide (102-01-2)	
NOAEL (oral, rat, 90 days)	12 mg/kg bodyweight/day 28 days
Affected organs	blood
Route of exposure	oral

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

acetoacetanilide (102-01-2)	
LC50 fish 1	242 (242 - 332) mg/l 96 hours, Brachydanio rerio
ErC50 (algae)	318 mg/l Selenastrum capricornutum , 72 hours
ErC50 (other aquatic plants)	500 mg/l 3 hours
NOEC chronic algae	180 mg/l

Tempilstik® 150 °F (66 °C), 158 °F (70 °C), 163 °F (73 °C), 167 °F (75 °C), 169 °F (76 °C), 175 °F (79 °C), 176 °F (80 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

barium sulfate (7727-43-7)	
LC50 fish 1	> 3.5 mg/l 96 h
EC50 Daphnia 1	14500 µg/l 48 h
Cobalt (7440-48-4)	
LC50 fish 1	275 mg/l
LOEC (chronic)	53.6 mg/l as cobalt dichloride
NOEC (chronic)	31.1 mg/l 28 d as cobalt dichloride

12.2. Persistence and degradability

acetoacetanilide (102-01-2)	
Persistence and degradability	Readily biodegradable.
Biodegradation	97 % degraded after 6 days
Carbon black (1333-86-4)	
Persistence and degradability	Not readily biodegradable.

12.3. Bioaccumulative potential

acetoacetanilide (102-01-2)	
Log Pow	0.76
barium sulfate (7727-43-7)	
BCF fish 1	68.4 L/kg
Cobalt (7440-48-4)	
Bioconcentration factor (BCF REACH)	< 73
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Tempilstik® 150 °F (66 °C), 158 °F (70 °C), 163 °F (73 °C), 167 °F (75 °C), 169 °F (76 °C), 175 °F (79 °C), 176 °F (80 °C)	
PBT: not yet assessed	
vPvB: not yet assessed	

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	: 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 / 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.

Tempilstik® 150 °F (66 °C), 158 °F (70 °C), 163 °F (73 °C), 167 °F (75 °C), 169 °F (76 °C), 175 °F (79 °C), 176 °F (80 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

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 %

15.2. 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>.

Tempilstik® 150 °F (66 °C), 158 °F (70 °C), 163 °F (73 °C), 167 °F (75 °C), 169 °F (76 °C), 175 °F (79 °C), 176 °F (80 °C)

Safety Data Sheet

according to Regulation (EU) 2015/830

Other information : None.

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

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 Chronic 4	Hazardous to the aquatic environment — Chronic Hazard, Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Resp. Sens. 1	Sensitisation — Respiratory, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Sensitisation — Skin, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H413	May cause long lasting harmful effects to aquatic life

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

Acute Tox. 4 (Oral)	H302	Calculation method
Acute Tox. 4 (Dermal)	H312	Calculation method
Acute Tox. 4 (Inhalation:dust,mist)	H332	Calculation method
STOT RE 2	H373	Calculation method

LA-CO EU CLP SDS United Kingdom

SDS Prepared by: The Redstone Group, LLC
6077 Frantz Rd.
Suite 206
Dublin, OH USA 43016
T 614-923-7472
www.redstonegrp.com

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