LA-CO Industries, Inc.

Tempilstik® 600 °F (316 °C), 608 °F (320 °C)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations, Canada Hazardous Products Regulations (HPR) / Règlement sur les produits dangereux (RPD)
SDS ID: LACO1504030
Issue date: 4/20/2015 Revision date: 6/28/2022 Supersedes: 4/20/2015 Version: 1.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : Tempilstik® 600 °F (316 °C), 608 °F (320 °C)

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Temperature indicator

1.3. Supplier

LA-CO Industries
1201 Pratt Blvd.
Elk Grove Village, IL, 60007-5746
US
T 847-956-7600 - F 847-956-9885
customer_service@laco.com

1.4. Emergency telephone number

Emergency number : 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887;
全国应急中心 0532 8388 9090

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral), Category 4	H302	Harmful if swallowed.
Serious eye damage/eye irritation, Category 2	H319	Causes serious eye irritation.

Full text of H-statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS) :

Signal word (GHS) : Warning
Hazard statements (GHS_US) : H302 - Harmful if swallowed.
H319 - Causes serious eye irritation.
Precautionary statements (GHS) : P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear eye protection, protective clothing, protective gloves.
P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330 - Rinse mouth.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P501 - Dispose of contents/container to Collection point.

2.3. Other hazards which do not result in classification

No data available

2.4. Unknown acute toxicity (GHS_US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% (w/w)	GHS US classification
Fluorescein	CAS-No.: 2321-07-5	80 - 90	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319
1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde, butylated	CAS-No.: 68002-25-5	3 - 5	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312
1-Butanol	CAS-No.: 71-36-3	2 - 3	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336 STOT SE 3, H335

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret.

Full text of hazard classes 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. Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Sand. Water spray.

Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical

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. Special protective equipment and precautions for fire-fighters

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.

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 : Chemical goggles or safety glasses. Wear suitable protective clothing and gloves.

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Chemical goggles or safety glasses. Wear suitable protective clothing and gloves. For further information refer to section 8: "Exposure controls/personal protection".

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 : Mechanically recover the product. Minimise generation of dust. On land, sweep or shovel into suitable containers.

Other information : Dispose of materials or solid residues at an authorized site.

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 : Ensure good ventilation of the work station. Avoid breathing dust, fume. Avoid contact with skin and eyes. Wear personal protective equipment. Do not handle until all safety precautions have been read and understood.

Hygiene measures : Always wash hands after handling the product. 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. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store in a well-ventilated place. Keep cool.

Incompatible products : Strong oxidizers. Strong bases.

Prohibitions on mixed storage : Keep away from incompatible materials.

Storage area : Store in dry, cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Fluorescein (2321-07-5)	
No data available	

1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde, butylated (68002-25-5)	
No data available	

1-Butanol (71-36-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	n-Butanol
ACGIH OEL TWA [ppm]	20 ppm
Remark (ACGIH)	Eye & URT irr
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	n-Butyl alcohol
OSHA PEL TWA [1]	300 mg/m³
OSHA PEL TWA [2]	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - NIOSH - Occupational Exposure Limits	

1-Butanol (71-36-3)	
NIOSH REL C	150 mg/m³
NIOSH REL C [ppm]	50 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid dispersal of dust in the air (i.e, clearing dust surfaces with compressed air). Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:
Wear dust impervious gloves.

Eye protection:
Chemical goggles or safety glasses.

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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : A solid crayon-like marker.

Colour : Variable

Odour : Odourless

Odour threshold : No data available

pH : No data available

Melting point : No data available

Freezing point : Not applicable

Boiling point : No data available

Flash point : Not applicable

Relative evaporation rate (butylacetate=1) : No data available

Flammability (solid, gas) : Non flammable

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

Auto-ignition temperature : Not applicable

Decomposition temperature : No data available

Viscosity, kinematic : Not applicable

Viscosity, dynamic : No data available

Explosive limits : Not applicable

Explosive properties : No data available

Oxidising properties : 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.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Tempilstik® 600 °F (316 °C), 608 °F (320 °C)	
ATE (oral)	685.937 mg/kg bodyweight

Fluorescein (2321-07-5)	
LD50 Oral rat	600 mg/kg
ATE (oral)	600 mg/kg bodyweight

1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde, butylated (68002-25-5)	
LD50 Oral rat	> 1100 mg/kg
LD50 Dermal rabbit	1800 mg/kg
LC50 Inhalation rat	> 6 mg/l/4h
ATE (dermal)	1800 mg/kg bodyweight

1-Butanol (71-36-3)	
LD50 Oral rat	2292 mg/kg Source: ECHA
LD50 Dermal rabbit	3430 mg/kg Source: ECHA
LC50 Inhalation rat [ppm]	8000 ppm Source: ECHA
ATE (oral)	500 mg/kg bodyweight
ATE (dermal)	3430 mg/kg bodyweight
ATE (gases)	8000 ppmv/4h

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

1-Butanol (71-36-3)	
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : Not applicable

Likely routes of exposure : Inhalation. Skin and eye contact.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Fluorescein (2321-07-5)	
LC50 fish 1	9.535 mg/l Source: ECOSAR

1-Butanol (71-36-3)	
LC50 fish 1	1376 mg/l Source: ECHA
EC50 crustacea	1983 mg/l Source: ECHA

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

1-Butanol (71-36-3)	
Log Pow	1 Source: ECHA

12.4. Mobility in soil

No data available

12.5. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector’s sorting instructions.

Sewage disposal recommendations : Do not dispose of waste into sewer.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not regulated.

Proper Shipping Name (TDG) : Not regulated.

Proper Shipping Name (IMDG) : Not regulated.

Proper Shipping Name (IATA) : Not regulated.

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : Not regulated.

TDG

Transport hazard class(es) (TDG) : Not regulated.

IMDG

Transport hazard class(es) (IMDG) : Not regulated.

IATA

Transport hazard class(es) (IATA) : Not regulated.

14.4. Packing group

Packing group (DOT) : Not regulated.

Packing group (TDG) : Not regulated.

Packing group (IMDG) : Not regulated.

Packing group (IATA) : Not regulated.

14.5. Environmental hazards

Other information : No supplementary information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

1-Butanol	CAS-No. 71-36-3	2 - 3%

1-Butanol (71-36-3)	
CERCLA RQ	5000 lb

15.2. International regulations

Tempilstik® 600 °F (316 °C), 608 °F (320 °C)

All components are listed on the EEC inventory European Inventory of Existing Commercial Chemical Substances (EINECS).
All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

Fluorescein (2321-07-5)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on Taiwan National Chemical Inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed on the Inventory of Existing Chemical Substances Produced or Imported in China (IECSC).
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde, butylated (68002-25-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

1-Butanol (71-36-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory

1-Butanol (71-36-3)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

15.3. US State regulations

WARNING: This product can expose you to Formaldehyde, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
1-Butanol(71-36-3)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Revision date : 06/28/2022

Data sources : ACGIH (American Conference of Government Industrial Hygienists). European Chemicals Agency (ECHA) C&L Inventory database. Accessed at http://echa.europa.eu/web/guest/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. OSHA 29CFR 1910.1200 Hazard Communication Standard. TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html.

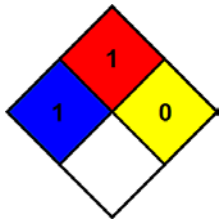
Other information : None.

Full text of H-statements	
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

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 Weighted Average
	TSCA: Toxic Substances Control Act

Abbreviations and acronyms	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

NFPA health hazard	:	1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA fire hazard	:	1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	:	0 - Material that in themselves are normally stable, even under fire conditions.



Indication of changes:
General information.

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.