TEM 0402
TEM 0450

Tempilstik® : 104 °F (40 °C), 131 °F (55 °C), 182 °F (83 °C), 200 °F (93 °C), 206 °F (97 °C), 213 °F (101 °C), 219 °F (104 °C), 225 °F (107 °C), 256 °F (124 °C), 263 °F (128 °C), 320 °F (160 °C), 325 °F (163 °C), 329 °F (165 °C), 383 °F (195 °C), 388 °F (198 °C), 392 °F (200 °C), 400 °F (204 °C), 413 °F (212 °C), 419 °F (215 °C), 550 °F (288 °C), 1400 °F (760 °C), 1450 °F (788 °C), 1500 °F (816 °C), 1550 °F (843 °C), 1600 °F (871 °C), 1650 °F (899 °C), 1700 °F (927 °C), 1800 °F (982 °C), 1900 °F (1038 °C), 1950 °F (1066 °C)

LA-CO Industries, Inc.

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
according to Canadian Hazardous Products Regulations (HPR)
Date of issue: 04/22/2015
Version: 1.0

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

1.1. Product identifier

Product form : Mixture

Trade name : Tempilstik® 104 °F (40 °C), 131 °F (55 °C), 182 °F (83 °C), 200 °F (93 °C), 206 °F (97 °C), 213 °F (101 °C), 219 °F (104 °C), 225 °F (107 °C), 256 °F (124 °C), 263 °F (128 °C), 320 °F (160 °C), 325 °F (163 °C), 329 °F (165 °C), 383 °F (195 °C), 388 °F (198 °C), 392 °F (200 °C), 400 °F (204 °C), 413 °F (212 °C), 419 °F (215 °C), 550 °F (288 °C), 1400 °F (760 °C), 1450 °F (788 °C), 1500 °F (816 °C), 1550 °F (843 °C), 1600 °F (871 °C), 1650 °F (899 °C), 1700 °F (927 °C), 1800 °F (982 °C), 1900 °F (1038 °C), 1950 °F (1066 °C)

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

Use of the substance/mixture : Temperature indicator

1.3. Details of the supplier of the safety data sheet

LA-CO Industries, Inc.
1201 Pratt Boulevard
Elk Grove Village, IL. 60007-5746
Phone: (847) 956-7600
Fax: (847) 956-9885
E-mail: 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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification in accordance with the Globally Harmonized Standard

Not classified

2.2 Label elements

GHS-US labelling

No labelling applicable

2.3. Other hazards

No additional information available

2.4 Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	% (w/w)	GHS-US classification
2',4'-dimethylacetoacetanilide	(CAS No) 97-36-9	84.79 : 182 °F	Acute Tox. 4 (Oral), H302
adipic acid	(CAS No) 124-04-9	6.38 : 383 °F 4.67 : 388 °F 4.71 : 392 °F	Eye Irrit. 2A, H319
salicylamide	(CAS No) 65-45-2	8.24 : 206 °F	Acute Tox. 4 (Oral), H302

Name	Product identifier	% (w/w)	GHS-US classification
Iron oxide red	(CAS No) 1309-37-1	1.69 : 263 °F 0.21 – 0.3 : 320 °F 0.79 : 1400 °F 0.84 – 1.22 : 1600 °F 1.52 : 1950 °F	Aquatic Chronic 2, H411
butyl 4-hydroxybenzoate	(CAS No) 94-26-8	0.91 : 182 °F	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
phenyl salicylate	(CAS No) 118-55-8	4.1 – 4.14 : 104 °F	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
lithium sulphate	(CAS No) 10377-48-7	1.9 : 1500 °F 1.88 : 1600 °F	Acute Tox. 4 (Oral), H302

Full text of H-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. 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 : 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 after inhalation : May cause respiratory irritation.

Symptoms/injuries after eye contact : Direct contact with the eyes is likely to be irritating.

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.

Reactivity : No dangerous reactions known.

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid creating or spreading dust.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable gloves.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Wear suitable gloves.
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

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

Tempilstik® 104 °F (40 °C), 131 °F (55 °C), 182 °F (83 °C), 200 °F (93 °C), 206 °F (97 °C), 213 °F (101 °C), 219 °F (104 °C), 225 °F (107 °C), 256 °F (124 °C), 263 °F (128 °C), 320 °F (160 °C), 325 °F (163 °C), 329 °F (165 °C), 383 °F (195 °C), 388 °F (198 °C), 392 °F (200 °C), 400 °F (204 °C), 413 °F (212 °C), 419 °F (215 °C), 550 °F (288 °C), 1400 °F (760 °C), 1450 °F (788 °C), 1500 °F (816 °C), 1550 °F (843 °C), 1600 °F (871 °C), 1650 °F (899 °C), 1700 °F (927 °C), 1800 °F (982 °C), 1900 °F (1038 °C), 1950 °F (1066 °C)	
ACGIH	Not applicable
OSHA	Not applicable

phenyl salicylate (118-55-8)	
ACGIH	Not applicable
OSHA	Not applicable

butyl 4-hydroxybenzoate (94-26-8)	
ACGIH	Not applicable
OSHA	Not applicable

2',4'-dimethylacetoacetanilide (97-36-9)	
ACGIH	Not applicable
OSHA	Not applicable

salicylamide (65-45-2)	
ACGIH	Not applicable
OSHA	Not applicable

Iron oxide red (1309-37-1)		
ACGIH	ACGIH TWA (mg/m³)	5 mg/m³

Iron oxide red (1309-37-1)		
ACGIH	Remark (ACGIH)	Pneumoconiosis
OSHA	OSHA PEL (TWA) (mg/m³)	10 mg/m³
Canada (Quebec)	VEMP (mg/m³)	5 mg/m³ (Fer, trioxyde de, fumées et poussières (exprimée en Fe)) 10 mg/m³ (Rouge)

adipic acid (124-04-9)		
ACGIH	ACGIH TWA (mg/m³)	5 mg/m³
ACGIH	Remark (ACGIH)	URT irr; ANS impair
OSHA	Not applicable	
Canada (Quebec)	VEMP (mg/m³)	5 mg/m³

lithium sulphate (10377-48-7)	
ACGIH	Not applicable
OSHA	Not applicable

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.

Eye protection : In case of dust production: protective goggles.

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

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

Log Kow : 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 : Oral: Not classified.

phenyl salicylate (118-55-8)	
LD50 oral rat	3000 mg/kg
ATE CLP (oral)	3000.000 mg/kg bodyweight

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

2',4'-dimethylacetoacetanilide (97-36-9)	
LD50 oral rat	1995 mg/kg
ATE CLP (oral)	1995.000 mg/kg bodyweight

salicylamide (65-45-2)	
LD50 oral rat	1400 mg/kg
ATE CLP (oral)	1400.000 mg/kg bodyweight

Iron oxide red (1309-37-1)	
LD50 oral rat	> 10000 mg/kg

adipic acid (124-04-9)	
LD50 oral rat	5560 mg/kg
LD50 dermal rabbit	7940 ml/kg
LC50 inhalation rat (mg/l)	> 7.7 mg/l/4h
ATE CLP (oral)	5560.000 mg/kg bodyweight

lithium sulphate (10377-48-7)	
LD50 oral rat	613 mg/kg
ATE CLP (oral)	613.000 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.

Iron oxide red (1309-37-1)	
IARC group	3 - Not classifiable
National Toxicology Program (NTP) Status	Not listed in carcinogenicity class

lithium sulphate (10377-48-7)	
NOAEL (chronic, oral, animal/male, 2 years)	15 mg/kg bodyweight

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

adipic acid (124-04-9)	
NOAEL (oral, rat, 90 days)	750 mg/kg bodyweight/day

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after eye contact : Direct contact with the eyes is likely to be irritating.

Likely routes of exposure : Inhalation;Skin and eye contact

SECTION 12: Ecological information

12.1 Toxicity

2',4'-dimethylacetoacetanilide (97-36-9)	
LC50 fish 1	250 (250 - 350) mg/l

salicylamide (65-45-2)	
LC50 fish 1	101 mg/l 96 h
EC50 Daphnia 1	75 mg/l 24 h

Iron oxide red (1309-37-1)	
EC50 Daphnia 1	> 100 mg/l

adipic acid (124-04-9)	
LC50 fish 1	>= 1000 mg/l 96 h
EC50 Daphnia 1	46 mg/l 48 h

lithium sulphate (10377-48-7)	
LC50 fish 1	30.3 mg/l read-across, 96 h
EC50 Daphnia 1	33.2 mg/l read across, 48 h
LOEC (chronic)	24.35 mg/l read-across lithium hydroxide monohydrate
NOEC (chronic)	17.35 mg/l read-across lithium hydroxide monohydrate

12.2. Persistence and degradability

phenyl salicylate (118-55-8)	
Persistence and degradability	Moderately biodegradable.

2',4'-dimethylacetoacetanilide (97-36-9)	
Biodegradation	25 % 28 d

salicylamide (65-45-2)	
Biodegradation	99 % 28 d

adipic acid (124-04-9)	
Persistence and degradability	Readily biodegradable.
Biodegradation	90 % 5 d

12.3. Bioaccumulative potential

phenyl salicylate (118-55-8)	
Log Pow	3.82
Bioaccumulative potential	Not established.

2',4'-dimethylacetoacetanilide (97-36-9)	
Log Pow	1.4

salicylamide (65-45-2)	
Log Pow	1.31

adipic acid (124-04-9)	
BCF fish 1	3.162
Log Pow	0.093

lithium sulphate (10377-48-7)	
Log Pow	-4.38

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

SECTION 14: Transport information

In accordance with DOT and TDG

Not considered a dangerous good for transport regulations

Proper Shipping Name (ADR) : Not applicable

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

phenyl salicylate (118-55-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

butyl 4-hydroxybenzoate (94-26-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

2',4'-dimethylacetoacetanilide (97-36-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

salicylamide (65-45-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Iron oxide red (1309-37-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

adipic acid (124-04-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb

lithium sulphate (10377-48-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. International regulations

CANADA

phenyl salicylate (118-55-8)
Listed on the Canadian DSL (Domestic Substances List) inventory.
butyl 4-hydroxybenzoate (94-26-8)
Listed on the Canadian DSL (Domestic Substances List) inventory.
2',4'-dimethylacetoacetanilide (97-36-9)
Listed on the Canadian DSL (Domestic Substances List) inventory.
salicylamide (65-45-2)
Listed on the Canadian DSL (Domestic Substances List) inventory.
Iron oxide red (1309-37-1)
Listed on the Canadian DSL (Domestic Substances List) inventory.
adipic acid (124-04-9)
Listed on the Canadian DSL (Domestic Substances List) inventory.
lithium sulphate (10377-48-7)
Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

phenyl salicylate (118-55-8)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
butyl 4-hydroxybenzoate (94-26-8)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
2',4'-dimethylacetoacetanilide (97-36-9)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
salicylamide (65-45-2)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Iron oxide red (1309-37-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
adipic acid (124-04-9)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
lithium sulphate (10377-48-7)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Tempilstik® 104 °F (40 °C), 131 °F (55 °C), 182 °F (83 °C), 200 °F (93 °C), 206 °F (97 °C), 213 °F (101 °C), 219 °F (104 °C), 225 °F (107 °C), 256 °F (124 °C), 263 °F (128 °C), 320 °F (160 °C), 325 °F (163 °C), 329 °F (165 °C), 383 °F (195 °C), 388 °F (198 °C), 392 °F (200 °C), 400 °F (204 °C), 413 °F (212 °C), 419 °F (215 °C), 550 °F (288 °C), 1400 °F (760 °C), 1450 °F (788 °C), 1500 °F (816 °C), 1550 °F (843 °C), 1600 °F (871 °C), 1650 °F (899 °C), 1700 °F (927 °C), 1800 °F (982 °C), 1900 °F (1038 °C), 1950 °F (1066 °C)
All components are listed on the EEC inventory European Inventory of Existing Commercial Chemical Substances (EINECS). All ingredients are listed in the Toxic Substances Control Act (TSCA). All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

15.3. US State regulations

Iron oxide red (1309-37-1)
U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List
adipic acid (124-04-9)
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

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Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
according to Canadian Hazardous Products Regulations (HPR)

SECTION 16: Other information

Indication of changes : Original Document.

Data sources : ACGIH (American Conference of Governement 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.

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.

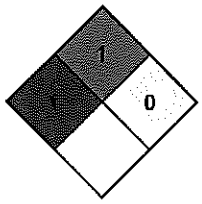
TSCA: Toxic Substances Control Act.

Other information : None.

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



Full text of H-phrases:

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Carc. 1A	Carcinogenicity, Category 1A
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H350	May cause cancer
H411	Toxic to aquatic life with long lasting effects

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LACO NA GHS 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