

SECTION 1: Identification**1.1. Identification**

Product form : Mixture
 Product name : Tempilaq® Advanced Thinner

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Coatings and paints, thinners, paint removers
 Restrictions on use : No additional information available

1.3. Supplier

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;
 全国应急中心 0532 8388 9090

SECTION 2: Hazard(s) identification**2.1. Classification of the substance or mixture****GHS classification**

Acute toxicity (inhalation:dust,mist) Category 4 H332 Harmful if inhaled.
 Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412 Harmful to aquatic life with long lasting effects.
 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) : H332 - Harmful if inhaled.
 H412 - Harmful to aquatic life with long lasting effects.
 Precautionary statements (GHS) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
 P271 - Use only outdoors or in a well-ventilated area.
 P273 - Avoid release to the environment.
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
 P312 - Call a poison center/doctor if you feel unwell
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS_US)

Not applicable

SECTION 3: Composition/information on ingredients**3.1. Substances**

Not applicable

3.2. Mixtures

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Name	Product identifier	% (w/w)	GHS classification
trans-dichloroethylene	(CAS-No.) 156-60-5	60 – 85	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Aquatic Chronic 3, H412
Methyl nonafluoroisobutyl ether	(CAS-No.) 163702-08-7	4 – 11	Acute Tox. 4 (Inhalation), H332
Methyl nonafluorobutyl ether	(CAS-No.) 163702-07-6	4 – 11	Acute Tox. 4 (Inhalation), H332

*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. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

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

- Symptoms/effects after inhalation : Harmful if inhaled. Dizziness. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.
- Symptoms/effects after eye contact : May cause slight irritation.

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 : Carbon dioxide. dry extinguishing powder. Large fires: Water spray. alcohol resistant foam.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Fire hazard : Not flammable. Flammable vapours may accumulate in the container. Burning produces irritating, toxic and noxious fumes.
- Explosion hazard : Heat may build pressure, rupturing closed containers.
- Reactivity : No dangerous reactions known.

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. Prevent fire fighting water from entering the environment.
- 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 contact with skin, eyes and clothing. Do not breathe vapour. Do not breathe aerosol.

6.1.1. For non-emergency personnel

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
- Other information : Ventilate area.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Use only outdoors or in a well-ventilated area. Avoid contact with skin, eyes and clothing. Do not breathe aerosol. Do not breathe vapours.
- Hygiene measures : Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety procedures. Use drum pumps, do not pour.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container. Keep container tight closed.
- Incompatible products : Alkali metals. Alkaline earth metals. Powdered metallic salts. Strong bases.
- Incompatible materials : Sources of ignition. Direct sunlight.
- Storage temperature : < 37.8 °C
- Heat and ignition sources : Keep away from heat, sparks and flame.
- Storage area : Store in dry, cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Methyl nonafluoroisobutyl ether (163702-08-7)		
Not applicable		
Methyl nonafluorobutyl ether (163702-07-6)		
Not applicable		
trans-dichloroethylene (156-60-5)		
ACGIH	Local name	1,2-Dichloroethylene, trans-isomer
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	Remark (ACGIH)	TLV® Basis: CNS impair; eye irr
ACGIH	Regulatory reference	ACGIH 2019
OSHA	OSHA PEL (TWA) (mg/m³)	790 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	200 ppm

8.2. Appropriate engineering controls

- Appropriate engineering controls : Avoid splashing. Avoid creating mist or spray. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide local exhaust or general room ventilation.
- Environmental exposure controls : Prevent leakage or spillage.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear suitable gloves resistant to chemical penetration. neoprene/butyl rubber

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Eye protection:

Safety glasses with side guards should be worn to prevent injury from airborne particles and/or other eye contact with this product

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Supplied air respirator if working in a confined area. Handling large quantities of product: Wear a self contained breathing apparatus.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless
Odour	: mild characteristic
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 41 °C
Flash point	: > 100 °C
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
Density	: 1.29 g/ml @ 20 °C
Solubility	: Insoluble.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: 0.349 mm ² /s
Viscosity, dynamic	: 0.45 mPa·s @ 20 °C
Explosive limits	: Lower explosive limit (LEL): 9.7 vol % Upper explosive limit (UEL): 12.8 vol %
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

VOC content : 1035 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. No flames, no sparks. Eliminate all sources of ignition.

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10.5. Incompatible materials

Alkali metals. Alkaline earth metals. Powdered metallic salts. Strong bases.

10.6. Hazardous decomposition products

None under normal use. Under fire conditions, hazardous fumes will be present. Fluorinated hydrocarbons. Hydrogen fluoride. Carbon oxides (CO, CO₂). hydrogen chloride. Carbonyl fluoride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

ATE (dust,mist)	1.5 mg/l/4h
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Methyl nonafluoroisobutyl ether (163702-08-7)

ATE (gases)	4500 ppmv/4h
ATE (vapours)	11 mg/l/4h
ATE (dust,mist)	1.5 mg/l/4h

Methyl nonafluorobutyl ether (163702-07-6)

ATE (gases)	4500 ppmv/4h
ATE (vapours)	11 mg/l/4h
ATE (dust,mist)	1.5 mg/l/4h

trans-dichloroethylene (156-60-5)

LD50 oral rat	7902 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 inhalation rat (mg/l)	95.4 mg/l/4h
ATE (oral)	7902 mg/kg bodyweight
ATE (gases)	4500 ppmv/4h
ATE (vapours)	11 mg/l/4h
ATE (dust,mist)	1.5 mg/l/4h

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

Reproductive toxicity : Not classified
STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified
Viscosity, kinematic : 0.349 mm²/s

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

Symptoms/effects after inhalation : Harmful if inhaled. Dizziness. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.

Symptoms/effects after eye contact : May cause slight irritation.

SECTION 12: Ecological information

12.1. Toxicity

trans-dichloroethylene (156-60-5)

LC50 fish 1	135 mg/l 96 h
EC50 crustacea	220 mg/l 48 h

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12.2. Persistence and degradability

Tempilaq® Advanced Thinner	
Persistence and degradability	May cause long-term adverse effects in the environment.

trans-dichloroethylene (156-60-5)

Persistence and degradability	Readily biodegradable.
Biodegradation	95 % 28 d

12.3. Bioaccumulative potential

Tempilaq® Advanced Thinner	
Bioaccumulative potential	Not established.

trans-dichloroethylene (156-60-5)

Log Pow	2.06
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12.4. Mobility in soil

Tempilaq® Advanced Thinner	
Ecology - soil	Not established.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal 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.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated.

Transportation of Dangerous Goods

Not regulated.

Transport by sea

Not regulated.

Air transport

Not regulated.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Methyl nonafluoroisobutyl ether (163702-08-7)	
EPA TSCA Regulatory Flag	PMN - PMN - indicates a commenced PMN substance.

Methyl nonafluorobutyl ether (163702-07-6)	
EPA TSCA Regulatory Flag	PMN - PMN - indicates a commenced PMN substance.

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trans-dichloroethylene (156-60-5)	
Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	1000 lb

15.2. International regulations

CANADA

Methyl nonafluoroisobutyl ether (163702-08-7)
Listed on the Canadian DSL (Domestic Substances List) inventory.
Methyl nonafluorobutyl ether (163702-07-6)
Listed on the Canadian DSL (Domestic Substances List) inventory.
trans-dichloroethylene (156-60-5)
Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

No additional information available

National regulations

Tempilaq® Advanced Thinner
All ingredients are listed in the Domestic Substances List (DSL).

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
trans-dichloroethylene(156-60-5)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Data sources : 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>. ACGIH (American Conference of Government Industrial Hygienists).

Other information : None.

Full text of H-statements:

H225	Highly flammable liquid and vapour.
H332	Harmful if inhaled.
H412	Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms:

	CAS (Chemical Abstracts Service) number
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	OSHA: Occupational Safety & Health Administration
	TSCA: Toxic Substances Control Act
	ATE: Acute Toxicity Estimate
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	European List of Waste (LoW) code

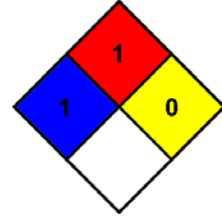
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	LD50: Lethal Dose for 50% of the test population
	STEL: Short Term Exposure Limits
	TWA: Time Weighted Average

- 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 - Normally stable, even under fire exposure conditions, and not reactive with water.



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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.