



Centre Anti-Poison pour le Québec: (800) 463-5060

Tél. (Qc): (418) 660-8666 / 800-890-8666


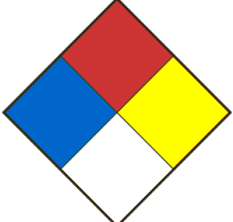
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SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier TETRAHYDROFURAN		Product Use Laboratory use	
Chemical formula C ₄ H ₈ O		Product code TH-0101; TR-0117	Molar weight 72,11
Chemical name / Commercial name / Synonymous TETRAHYDROFURANE, TÉTRAHYDROFURANNE, DIETHYLENE OXIDE, TETRAMETHYLENE OXIDE, THF, 1,4-EPOXYBUTANE, BUTYLENE OXIDE, CYCLOTETRAMETHYLENE OXIDE, FURANIDINE, OXACYCLOPENTANE, OXOLANE			
Supplier's name Laboratoire MAT		Address-Street 610, Adanac Street	
City Québec		Province Québec	
Postal code G1C 7B7	Internet www.labmat.com	Phone number 418-660-8666 / 800-890-8666	
Emergency phone	CANUTEC: 613-996-6666		CENTRE ANTI-POISON DU QUÉBEC 800-463-5060
Date SDS 2/3/2020	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	<p>Flammable liquids category 2</p> <p>Acute toxicity - Oral category 4</p> <p>Serious eye damage/ Eye irritation category 2A</p> <p>Carcinogenicity category 2</p> <p>Specific target organ toxicity - Single exposure category 3</p>
Signal Word	<p>DANGER</p>
Hazards statements (H)	<p>H225 Highly flammable liquid and vapour.</p> <p>H302 Harmful if swallowed.</p> <p>H319 Causes serious eye irritation.</p> <p>H335 May cause respiratory irritation.</p> <p>H351 Suspected of causing cancer.</p>
Precautionary statements (P)	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.</p> <p>P233 Keep container tightly closed.</p> <p>P240 Ground/bond container and receiving equipment.</p> <p>P241 Use explosion-proof electrical/ventilating/lighting equipment.</p> <p>P242 Use only non-sparking tools.</p> <p>P243 Take precautionary measures against static discharge.</p> <p>P261 Avoid breathing dust / fume / gas / mist / vapours / spray.</p> <p>P264 Wash the areas of the body that have been in contact with the product after handling.</p> <p>P270 Do no eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308 + P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P312 Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P330 Rinse mouth.</p> <p>P337 + P313 If eye irritation persists: Get medical advice/attention.</p> <p>P370 + P378 In case of fire: Use water spray or alcohol-resistant foam, or dry powder or carbon dioxide for extinction.</p> <p>P403 + P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P403 + P235 Store in a well-ventilated place. Keep cool.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company.</p> <p>P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.</p>
PICTOGRAMS	
Other dangers	<p>NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)</p>
	<p>Health 2</p> <p>Fire 4</p> <p>Reactivity 1</p> <p>Special danger</p>

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Tétrahydrofuran	109-99-9	<=100

SECTION 04 - FIRST AID MEASURES

Eye contact	Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. If irritation persists, seek medical attention.
Skin contact	Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention.
Inhalation	Move the unwell person to the fresh air. If breathing is difficult, give oxygen. Consult a physician.
Ingestion	Do NOT induce vomiting. If the person is conscious, rinse the mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.
Most important symptoms and effects (acute and delayed)	Ref. section 11.
Immediate medical attention and special treatment, if necessary	In case of medical consultation, keep this sheet available.
General advice	Show this safety data sheet to the doctor in attendance.

SECTION 05 - FIREFIGHTING MEASURES

Flammability	Yes
Ignition conditions	Keep away from heat/sparks/open flame/hot surface.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	Do not use a jet of water.
Hazardous combustion / decomposition products	Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NO _x). - Carbon Oxides. Peroxides.
Special fire and explosion hazards	May react violently with incompatible products (Ref Section 10). May form explosive peroxide.
Special protective equipment and precautions for firefighters	Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus.

SECTION 06 - ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up / Personnel precautions, protective equipment	Evacuate personnel to safe areas. Eliminate all sources of inflammation. Absorb the product with sand or vermiculite. Dilute residues with water, clean and rinse. Ensure a good ventilation of the premises. Dispose of residues in a container for disposal of hazardous materials. When handling, wear suitable safety equipment. Use breathing apparatus if necessary. Ensure adequate ventilation. Avoid breathing vapours, mist or gas. Vapours can accumulate in low areas. Discharge into the environment must be avoided. Do not let product enter drains.
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SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Tetrahydrofuran	109-99-9	TWA	50.000000 ppm 147.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Substance may be readily absorbed through intact skin			
		STEL	100.000000 ppm 295.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Substance may be readily absorbed through intact skin			
		TWA	50.000000 ppm	Canada. British Columbia OEL
	Contributes significantly to the overall exposure by the skin route.			
		STEL	100.000000 ppm	Canada. British Columbia OEL
	Contributes significantly to the overall exposure by the skin route.			
	TWAEV 100.000000 ppm 300.000000 mg/m3 Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants			
		TWA	50.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	100.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)

Data source	Sigma-Aldrich.
Ventilation	Fan.
Respiratory	If the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply.
Gloves	Handle with gloves.
Eyes	Safety goggles with safety shutters.
Shoes	Safety shoes.
Clothing	Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Engineering control	Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values.

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid.
Appearance	Incolore.
Odour	Distillats de pétrole.
Odour threshold	2.5ppm
pH	7-8 20% solution aqueuse.
Melting point / Freezing point	-108.44°C à 760.00 mmHg.
Initial boiling point	65-67°C
Boiling range	Data not available
Flash point	-21.2°C
Evaporation rate	14.5%
Flammability	Yes
Lower flammable / Explosive limit	1.8%
Upper flammable / Explosive limit	11.8%
Vapour pressure	17 kPa à 20°C.
Vapour density	2.5 à 25 °C (77 °F) - (Air = 1.0)-
Relative density	0.889g/cm ³
Solubility	Miscible avec l'eau, l'alcool, les cétones, l'éther et les hydrocarbures.
Partition coefficient water/n-octanol	log Pow : 0.46-
Auto-ignition temperature	215°C
Decomposition temperature	Data not available
Viscosity	0.53 cP à 20°C

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Non-reactive under normal conditions.
Chemical stability	Stable under recommended storage conditions. Test for peroxide formation before distillation or evaporation. Test for peroxide formation or discard after 1 year. Hygroscopic.
Possibility of hazardous reactions	Stable under normal conditions. Vapours may form explosive mixture with air.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	Heat, flames and sparks. Avoid excessive heat and humidity. Exposure to moist air or water.
Incompatible material	Strong oxidizing agents. Acids.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. Carbon oxides. Peroxides. Nitrogen oxides (NO _x).

SECTION 11 - TOXICOLOGICAL INFORMATION

TETRAHYDROFURAN

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Severe irritation and burning may cause permanent eye damage.
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Drowsiness and loss of consciousness.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Narcotic effects, liver and kidney damage, gastrointestinal disorders, cramps, diarrhea, headache, paleness, nausea and vomiting, dizziness, drowsiness, tremor, salivation, seizures, hypotension, respiratory collapse, unconsciousness, coma and can lead to death.
Chronic exposure effects / symptoms	Is recognized as a possible carcinogen for humans (class 2B) by IARC. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Causes central nervous system depression.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 1 650 mg/kg LD50 Dermal - Rat - > 2000 mg/kg
CL50 (specify species and route of entry)	CL50 inhalation - Rat 180 mg/L - 1 h 53.9 mg/L - 4 h

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	EC50 - Daphnia (water flea) - 3485 mg/L - 48 h CL50 Pimephales promelas : 2160 mg/L - 96 h
Persistence and degradability	Persistence is unlikely based on information available.
Bioaccumulative potential	No bioaccumulation is to be expected (log Pow <= 4).
Mobility in soil	Probable mobility in the environment due to its solubility in water.
Other adverse effects	Data not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of contents / container in accordance with local / regional / national / international regulations / or contact a specialist waste disposal company.
Contaminated Packaging	Dispose of as unused product.

SECTION 14 - TRANSPORT INFORMATION

UN Number	2056
UN Proper shipping name	TÉTRAHYDROFURANNE
Transport hazard class(es)	3 Flammable liquids
Packing group	II
Limited quantity index	1L
ERAP Index	-
Special precautions	-

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Flammable liquids category 2 Acute toxicity - Oral category 4 Serious eye damage/ Eye irritation category 2A Carcinogenicity category 2 Specific target organ toxicity - Single exposure category 3
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SECTION 16 - OTHER INFORMATION

Further information

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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