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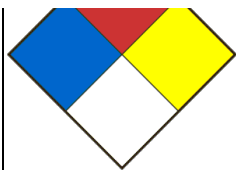
## SAFETY DATA SHEET

### SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier TOLUENE		Product Use Laboratory use	
Chemical formula C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub>		Product code TR-0120	Molar weight 92,14
Chemical name / Commercial name / Synonymous Méthylbenzène; Toluol; Phénylméthane.			
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 6/5/2023	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

## SECTION 02 - HAZARDS IDENTIFICATION

<b>Classification WHIMS / GHS</b>	<p>Flammable liquids category 2</p> <p>Skin corrosion/irritation - Skin irritation category 2</p> <p>Reproductive toxicity category 2</p> <p>Specific target organ toxicity - Single exposure category 3</p> <p>Specific Target Organ Toxicity - Repeated exposure category 2</p> <p>Aspiration hazard category 1</p>
<b>Signal Word</b>	<p>DANGER</p>
<b>Hazards statements (H)</b>	<p>H225 Highly flammable liquid and vapor.</p> <p>H304 May be fatal if swallowed and enters airways.</p> <p>H315 Causes skin irritation.</p> <p>H336 May cause drowsiness or dizziness.</p> <p>H361 Suspected of damaging fertility or the unborn child.</p> <p>H373 May cause damage to organs through prolonged or repeated exposure.</p>
<b>Precautionary statements (P)</b>	<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>P260 Do not breathe dust / fume / gas / mist / vapors / spray.</p> <p>P261 Avoid breathing dust / fume / gas / mist / vapors / spray.</p> <p>P264 Wash the areas of the body that have been in contact with the product after handling.</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>P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</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>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>P314 Get medical advice/attention if you feel unwell.</p> <p>P321 Specific treatment (see section 4 of the SDS and on this label).</p> <p>P331 Do NOT induce vomiting.</p> <p>P332 + P313 If skin irritation occurs: Get medical advice/attention.</p> <p>P362 + P364 Take off contaminated clothing and wash it before reuse.</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>
<b>PICTOGRAMS</b>	
<b>Other dangers</b>	<p>NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)</p>
	<p><b>Health</b> 3</p> <p><b>Fire</b> 4</p>



Reactivity 0  
Special danger

## SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Toluène	108-88-3	<=100

## SECTION 04 - FIRST AID MEASURES

<b>Eye contact</b>	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.
<b>Skin contact</b>	Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention.
<b>Inhalation</b>	Move the unwell person to the fresh air. If breathing is difficult, give oxygen. Consult a physician.
<b>Ingestion</b>	If the person is conscious, give water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.
<b>Most important symptoms and effects (acute and delayed)</b>	Main symptoms of high exposure: Headaches. Dizziness. Nausea and vomiting. Feeling drunk. Tiredness. Lungs damage. Anesthesia. Cough. Pulmonary edema. Skin irritation. Eyes irritation. Ref. section 11.
<b>Immediate medical attention and special treatment, if necessary</b>	In case of medical consultation, keep this sheet available.
<b>General advice</b>	Show this safety data sheet to the doctor in attendance.

## SECTION 05 - FIREFIGHTING MEASURES

<b>Flammability</b>	Yes
<b>Ignition conditions</b>	Strong oxidizing agents, heat, sparks and open flame. Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable extinguishing media</b>	Data not available.
<b>Hazardous combustion products</b>	Hazardous combustion products formed under fire conditions: Carbon oxides.
<b>Special fire and explosion hazards</b>	Steam can travel a great distance and ignite on sources of ignition such as heaters, electrical appliances, cigarettes, sparks, etc. Containers exposed to fire may explode. Vapors may form flammable or explosive mixtures with air. Contact with strong oxidizing agents may cause fire. Toluene may spontaneously ignite or explode on contact with the following products: nitric acid, sulfuric acid, silver perchlorate, nitrogen tetroxide, bromine trifluoride, 1,3-dichloro-dimethyl- 5.5 imidazolidione-2,4, tetranitromethane and uranium hexafluoride. May react violently with incompatible products (Ref Section 10).
<b>Special protective equipment and precautions for firefighters</b>	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

<b>Methods and materials for containment and cleaning up / Personnel precautions, protective equipment</b>	Evacuate personnel to safe areas. Remove all sources of ignition. Dilute residues with water, clean and rinse. Ensure a good ventilation of the premises. When handling, wear appropriate safety equipment. Use a respirator as needed. Avoid breathing vapors, mist or gas. Beware of vapors accumulating to form explosive concentrations. Dispose of residues in a container provided for the disposal of hazardous materials. Do not let product enter drains.
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## SECTION 07 - HANDLING AND STORAGE

<b>Conditions for safe storage</b>	Store in a cool, dry place. Keep container tightly closed and store away from heat, sparks and open flame. Use venting and electrical equipment that is grounded and does not produce ignition sources (sparks). Protect from the sun's rays. Keep container tightly closed in a dry and well-ventilated place. Keep container tightly closed away from heat, moisture, and incompatible materials.
<b>Methods of handling</b>	Bottle in the glass only. Always open containers slowly to allow any excess pressure to vent. Avoid ingestion and inhalation. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Wear personal protective equipment when handling. Always ensure good ventilation. Transport according to TDG (ref Section 14)

## SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

### Workplace control parameters

Components	CAS-No.	Control parameters	Value	Basis
Toluene	108-88-3	TWA	20 ppm	Canada. British Columbia OEL
Remarks	Adverse reproductive effect			
		TWA	50 ppm 188 mg/m <sup>3</sup>	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Substance may be readily absorbed through intact skin				
		TWAEV	20 ppm	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
Skin (percutaneous)				
		TWA	20 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Visual impairment Female reproductive Pregnancy loss 2013 Adoption Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen			
		TWAEV	20 ppm	Canada. Ontario OELs

<b>Data source</b>	Sigma-Aldrich.
<b>Ventilation</b>	Fan.
<b>Respiratory</b>	If the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply.
<b>Gloves</b>	Handle with gloves.
<b>Eyes</b>	Safety goggles with safety shutters.
<b>Shoes</b>	Safety shoes.
<b>Clothing</b>	Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
<b>Engineering control</b>	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

<b>Physical state</b>	Liquid.
<b>Appearance</b>	Liquide incolore.-
<b>Odour</b>	Odeur aromatique..
<b>Odour threshold</b>	Data not available
<b>pH</b>	Donnée non disponible.
<b>Melting point / Freezing point</b>	-93°C
<b>Initial boiling point</b>	110.6°C
<b>Boiling range</b>	Data not available
<b>Flash point</b>	4.0°C
<b>Evaporation rate</b>	2.24%
<b>Flammability</b>	Yes
<b>Lower flammable / Explosive limit</b>	1.2% v/v
<b>Upper flammable / Explosive limit</b>	7.1% v/v
<b>Vapour pressure</b>	24.0 mm @ 20°C-
<b>Vapour density</b>	3.2 (Air=1)-
<b>Relative density</b>	0.865g/cm <sup>3</sup>
<b>Solubility</b>	Insoluble dans l'eau. Miscible avec l'alcool, l'acétone, le chloroforme et l'éther.
<b>Partition coefficient water/n-octanol</b>	0.0026-
<b>Auto-ignition temperature</b>	535.0°C
<b>Decomposition temperature</b>	Data not available
<b>Viscosity</b>	Data not available

## SECTION 10 - STABILITY AND REACTIVITY

<b>Reactivity</b>	May ignite on contact with oxidants. Flammable product, may ignite with source of ignition, if temperature above flash point.
<b>Chemical stability</b>	Stable under recommended storage conditions. Sensitive to heat.
<b>Possibility of hazardous reactions</b>	Vapors may form explosive mixture with air. Highly flammable liquid and vapors.
<b>Conditions of instability (Including sensitivity to shock / static discharge / vibration)</b>	Heat, flames, sparks. Avoid the accumulation of static electricity. Avoid contact with incompatible materials.
<b>Incompatible material</b>	Strong oxidizing agents (nitric acid, perchloric acid, peroxides, chlorates and perchlorates), sulfuric acid, nitrogen tetroxide, bromine trifluoride, 1,3-dichloro-dimethyl-5,5-imidazolidione 2,4, tetranitromethane, uranium hexafluoride, heat and moisture.
<b>Hazardous decomposition products</b>	Hazardous decomposition products formed under fire conditions. Carbon oxides.

## SECTION 11 - TOXICOLOGICAL INFORMATION

## TOLUENE

<b>Routes of exposure</b>	Ingestion, inhalation, skin and eyes.
<b>Acute exposition effects / symptoms:</b>	By exposure route below.
<b>- Eyes</b>	Irritation and tearing.
<b>- Skin</b>	Irritation and dermatitis.
<b>- Inhalation</b>	Irritation of the mucous membranes and respiratory tract. Narcotic effects, chest pain, cough, dyspnea, headache, vertigo, watery eyes, drowsiness, confusion, incoordination, paresthesia, nystagmus, mydriasis, nausea and vomiting, weakness, convulsions, stupor, ventricular fibrillation, cardiac arrest and death .
<b>Acute toxicity (Ingestion)</b>	Irritation of the mucous membranes. Narcotic effects, chest pain, cough, dyspnea, headache, vertigo, watery eyes, drowsiness, confusion, incoordination, paresthesia, nystagmus, mydriasis, nausea and vomiting, weakness, convulsions, stupor, ventricular fibrillation, cardiac arrest and death . NOTE: Aspiration of the product into the lungs may cause chemical pneumonitis, hemorrhagic pulmonary edema resulting in rapid death from cardiac arrest, respiratory paralysis and asphyxia.
<b>Chronic exposure effects / symptoms</b>	Depression of the central nervous system. Burning sensation, dermatitis, narcotic effects, liver and kidney damage, chest pain, cough, dyspnea, laryngitis, headache, dizziness, drowsiness, confusion, paresthesia, nystagmus, memory and concentration problems, metallic taste in the mouth, tremor, muscle weakness, hypokalemia, weight loss and loss of appetite, nausea and vomiting. The absorption of alcohol can aggravate the symptoms of intoxication.
<b>DL50 (specify species and route of entry)</b>	LD50 Oral - Rat - 5580 mg/kg. LD50 Dermal - Rabbit - 5000 mg/kg.
<b>CL50 (specify species and route of entry)</b>	LC50 Inhalation - Rat - 4h - 25.7 - 30 mg/L

## SECTION 12 - ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Toxicity to fish: LC50 - <i>Oncorhynchus mykiss</i> (rainbow trout) - 7.63 mg/l - 96 h. NOEC - <i>Pimephales promelas</i> (fathead minnow) - 5.44 mg/l - 7 d Toxicity to daphnia and other aquatic invertebrates: EC50 - <i>Daphnia magna</i> (Water flea) - 8.00 mg/l - 24 h Immobilization EC50 - <i>Daphnia magna</i> (Water flea) - 6 mg/l - 48 h Toxicity to algae: EC50 - <i>Chlorella vulgaris</i> (Fresh water algae) - 245.00 mg/l - 24 h EC50 - <i>Pseudokirchneriella subcapitata</i> (green algae) - 10.00 mg/l - 24 h
<b>Persistence and degradability</b>	Biodegradability Result: - Readily biodegradable
<b>Bioaccumulative potential</b>	Bioaccumulation <i>Leuciscus idus</i> (Golden orfe) - 3 d. Bioconcentration factor (BCF): 90.
<b>Mobility in soil</b>	Data not available.
<b>Other adverse effects</b>	Toxic to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## SECTION 13 - DISPOSAL CONSIDERATIONS

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

## SECTION 14 - TRANSPORT INFORMATION

<b>UN Number</b>	1294
<b>UN Proper shipping name</b>	TOLUÈNE
<b>Transport hazard class(es)</b>	3 Flammable liquids
<b>Packing group</b>	II
<b>Limited quantity index</b>	1L
<b>ERAP Index</b>	-
<b>Special precautions</b>	-

## SECTION 15 - REGULATORY INFORMATION

<b>WHIMS CANADA</b>	Flammable liquids category 2 Skin corrosion/irritation - Skin irritation category 2 Reproductive toxicity category 2 Specific target organ toxicity - Single exposure category 3 Specific Target Organ Toxicity - Repeated exposure category 2 Aspiration hazard category 1
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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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