SAFETY DATA SHEET

SECTION 01 - IDENTIFICATION

Product Identifier	3-NITROTOLUENE
Other identification (Chemical name, Commercial name, Synonymous)	m-Nitrotoluène; m-Nitrotoluol; Meta-Nitrotoluène; 1-Méthyl-3-nitrobenzène; 3-Méthylnitrobenzène; 3-Nitrotoluol
Product code	NR-0130
Chemical formula	$C_7H_7NO_2$
Molar weight	137.14
Recommended use and Restrictions on use	For laboratory, school, commercial or industrial use. Not for medical or household use. Do not use for medical, food or household purposes.
Supplier	LABORATOIRE MAT 610, rue Adanac Québec Québec G1C 7B7 418-660-8666 Mon-Fri 8h-16h www.labmat.com labmat@labmat.com
Emergency phone	418-660-8666 Mon-Fri 8h-16h CENTRE ANTI-POISON DU QUÉBEC 800-463-5060
Date SDS	2025-11-27

SECTION 02 - HAZARDS IDENTIFICATION

WHIMS CANADA

- Acute toxicity - Dermal - category 3
- Acute toxicity - Inhalation - category 3
- Acute toxicity - Oral - category 4
- Specific Target Organ Toxicity - Repeated exposure - category 2

PICTOGRAMS

Signal Word

DANGER

Hazards statements (H)

- Toxic in contact with skin
- Toxic if inhaled
- Harmful if swallowed
- May cause damage to organs through prolonged or repeated exposure

Precautionary statements (P)

- Wear protective gloves (Viton®, nitrile, butyl), protective clothing and eye and face protection.
- IF ON SKIN: Wash with plenty of water
- Call a POISON CENTER or a doctor or if you feel unwell.
- Store locked up.
- Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company.
- Use only outdoors or in a well-ventilated area.
- IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- Call a POISON CENTER or a physician.
- Store in a well ventilated place. Keep container tightly closed.
- Do not eat, drink or smoke when using this product.
- IF SWALLOWED: Call a POISON CENTER or a physician if you feel unwell.
- Rinse mouth.
- Do not breathe mists, gases, vapors and other fumes, or the product itself.
- Get medical attention if you feel unwell.

Other dangers

NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)

Health	3
Fire	1
Reactivity	0
Special danger	

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Component	No. CAS	% Weight
3-Nitrotulène	99-08-1	<=100%

SECTION 04 - FIRST AID MEASURE

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 contaminated 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	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.
Most important symptoms and effects (acute and delayed)	Main symptoms of high exposure: Methemoglobinemia (methemoglobin level too high in the blood). Liver damage. Headaches. Redness. Irritability. Dizziness. Cyanosis (blue to black coloring of the skin and nails). Nausea and vomiting. Increased pulse. Skin irritation. Spleen damages. Muscular weakness. Convulsions. Breathing difficulties.
Immediate medical attention and special treatment, if necessary	Treat according to symptoms. Show this sheet to the attending physician.

SECTION 05 - FIREFIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	No limitations on extinguishing agents.
Combustion products	Hazardous combustion products formed under fire conditions: Carbon oxides. Nitrogen oxides (NOx).
Specific hazards of the dangerous product	Containers exposed to fire or its heat may explode. Vapors are heavier than air and may spread along floors. May react violently with incompatible products (Ref Section 10).
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

Personal precautions, protective equipment and emergency measures	Cut off all sources of ignition. Avoid the accumulation of charges electrostatic. Vapours can accumulate in low-lying areas. Beware of vapors accumulating to form explosive concentrations. Evacuate personnel to safe areas. When handling, wear appropriate safety equipment (reference Section 8 for protective equipment to be used). Ensure a good ventilation. Use NIOSH cartridge respiratory protection if necessary or for larger spills.
Methods and materials for containment and cleaning up	Absorb the product with sand or vermiculite. Dilute residues with water, clean and rinse. Dispose of residues in a container for disposal of hazardous materials. Discharge into the environment must be avoided.

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Store in a cool, dry, and well-ventilated place. Keep container tightly closed and store away from heat, moisture, and incompatible products (ref. section 10).
Methods of handling	Avoid contact withh eyes, skin and clothing. Avoid ingestion and inhalation. Wear personal protective equipment (ref. section 8) when handling. Always ensure good ventilation. Bottle in the glass only. NOTE: may attack some plastics, rubbers and coatings. Apply the usual standard hygiene rules: Wash your hands after use. Do not eat or drink during use.

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

WORKPLACE CONTROL PARAMETERS

Components	CAS-No.	Control parameters	Value	Basis
3-Nitrotoluene	99-08-1	TWA	2ppm 11mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Substance may be readily absorbed through intact skin			
		TWA	2ppm	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	Skin (percutaneous)			
		TWA	2ppm	Canada. Ontario Reg.833
		TWA	2ppm	Canada. British Columbia OEL
		TWA	2ppm	USA. ACGIH Threshold Limit Values (TLV)

Data origin	Alberta OELs. Ontario Regulation 833. CNESST Worksafebc.com Sigma-Aldrich (Millipore Sigma)
Respiratory	If work under the hood is not possible, or if the permissible levels are exceeded, use NIOSH cartridge respiratory protection, or an air-supplied respirator.
Gloves	Handle with protective gloves. Suggested material: Nitrile. Butyl. Viton® (Fluoroelastomer). The type, thickness and length of the glove must be chosen according to the use, the concentration of the product, as well as the duration of use. Replace gloves regularly for better protection.
Eyes	Safety goggles with safety shutters.
Shoes	Use safety shoes.
Clothes	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	Use fan. 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
Color	Yellow
Odour	Characteristic
Odour threshold	0.045ppm
Melting point and freezing point	14-16°C
Boiling point	230-231°C
Flammability	Combustible
Lower flammable / Explosive limit	2.2%V/V
Upper flammable / Explosive limit	Data not available
Flash point	106°C
Auto-ignition temperature	Data not available
Decomposition temperature	270 °C
pH	Not applicable
Kinematic viscosity	Data not available
Solubility	Slightly soluble in water (<1 g/l @20 °C)
Partition coefficient water/n-octanol	Water / oil 0,0040
Vapour pressure	0.1 mmHg @ 20 °C
Relative density	1,1571 g/ml @ 20 °C
Vapour density	4.73 (air=1)
Particle characteristics	Not applicable

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	May form explosive mixtures with air on intense heating. May react violently with incompatible substances.
Chemical stability	Stable under recommended storage conditions. Sensitive to heat.
Possibility of hazardous reactions	May react violently with incompatible substances. Vapours can form explosive mixtures with air when heated.
Conditions to avoid	Avoid contact with incompatible materials and extreme temperatures. Heat, flames and sparks.
Incompatible materials	Strong oxidizers. Can form an explosive mixture with: Sulfuric acid. Alkali salts. Reducing agents. Peroxides. Sulfur trioxide. Exothermic reactions with: Ammonia. Strong oxidizers. Sodium hydroxide. Strong acids.
Hazardous decomposition products	Carbon monoxide (CO), Carbon dioxide (CO2). Nitrogen oxides (NOx).

SECTION 11 - TOXICOLOGICAL INFORMATION

3-NITROTOLUENE

Routes of exposure	Ingestion, inhalation and skin contact.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation. Pain.
- Skin	Irritation. Breathing difficulties. Cyanosis. Nausea and vomiting. Muscular weakness. Convulsions. Headache. Increased pulse and respiratory. Irritability. Redness. Dizziness. The product is absorbed through the skin.
- Inhalation	Headaches. Redness. Nausea and vomiting. Muscular weakness. Convulsions. Irritability. Increased pulse and respiratory. Cyanosis. Breathing difficulties. Dizziness.
Acute toxicity (Ingestion)	Headaches. Disturbance of heart rhythm. Damage to the spleen. Nausea and vomiting. Redness. Convulsions. Muscular weakness. Irritability. Cyanosis. Breathing difficulties. Dizziness.
Chronic exposure effects / symptoms	Methemoglobinemia (methemoglobin level too high in the blood). Anemia. Is recognized as an unclassifiable agent for its carcinogenicity (Group 3 according to IARC). Cyanosis (blue to black coloring of the skin and nails). Spleen damages. Liver damage. Cardiovascular disorders. Muscle weakness. Redness. Dyspnoea. Headache. Irritability. Dizziness.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 1072 mg/kg. LD50 Dermal - Rabbit - 1750mg/kg.
CL50 (specify species and route of entry)	LC50 Inhalation - Mouse - 4 h - 425mg/m3.

SECTION 12 - ECOLOGICAL INFORMATION

3-NITROTOLUENE

Ecotoxicity	Toxicity to fish: Flow-through test - LC50 - Danio rerio (zebra fish) - 35.3 mg/l - 96 h. Toxicity to daphnia and other aquatic invertebrates: Static test EC50 - Daphnia magna (Water flea) - 7.4 mg/l - 48 h. Toxicity to algae: Growth inhibition ErC50 - Chlorella pyrenoidosa - 14 mg/l - 96 h. Toxicity to bacteria: EC50 - Photobacterium phosphoreum - 3.95 mg/l - 15 min. Chronic toxicity - Toxicity to fish: Semi-static test - NOEC - Oryzias latipes (Orange-red killifish) - 2mg/l - 28d. Toxicity to daphnia and other aquatic invertebrates: Reproduction Test - NOEC - Daphnia magna (Water flea) - 0.5 mg/l - 21 d.
Persistence and degradability	Biodegradability aerobic - Exposure time 14 d - Result: 2% Not readily biodegradable.
Bioaccumulative potential	Data not available.
Mobility in soil	Data not available.
Other adverse effects	Avoid release to the environment.

SECTION 13 - DISPOSAL CONSIDERATIONS

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

SECTION 14 - TRANSPORT INFORMATION

UN Number	1664
UN Proper shipping name	NITROTOLUÈNES LIQUIDES
Transport hazard class(es)	Matières toxiques 6.1
Packing group	II
Limited quantity index	0.1 L
ERAP Index	-
Special precautions	-

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA

- Acute toxicity - Dermal - category 3
- Acute toxicity - Inhalation - category 3
- Acute toxicity - Oral - category 4
- Specific Target Organ Toxicity - Repeated exposure - category 2

SECTION 16 - OTHER INFORMATION

CNESST: Commission des normes, de l'équité et de la santé et sécurité au travail
NIH: National institute of health (U.S. Naltional Library of Medecine)
ECHA: Agence Européenne de Chimie
ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
VECD: Valeur d'exposition courte durée
VEMP: Valeur d'exposition moyenne pondérée
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TLV : Threshold limit value
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling
RSST: Règlement sur la santé et sécurité au travail (Québec)
INRS: l'Institut national de recherche et de sécurité pour la prévention des accidents du travail et des maladies professionnelles (France)

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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