SAFETY DATA SHEET

SECTION 01 - IDENTIFICATION

Product Identifier	PICRIC ACID 2.5%W/V (in denaturated ethanol 80%)
Other identification (Chemical name, Commercial name, Synonymous)	-
Product code	PS-0255
Chemical formula	Mélange
Molar weight	
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	2026-03-12

SECTION 02 - HAZARDS IDENTIFICATION

WHIMS CANADA

- Flammable liquids - category 2
- Serious eye damage/eye irritation - Eye irritation - category 2
- Respiratory or skin sensitization - Skin sensitize - category 1
- Specific Target Organ Toxicity - Single exposure - category 1

PICTOGRAMS



Signal Word

DANGER

Hazards statements (H)

- Highly flammable liquid and vapour
- Causes serious eye irritation
- May cause an allergic skin reaction
- Causes damage to organs

Precautionary statements (P)

- Keep away from heat, sparks, open flames, hot surfaces. — No smoking.
- Keep container tightly closed.
- Ground and bond container and receiving equipment.
- Use explosion-proof equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wear protective gloves (Nitrile, butyl, laminated material (PE/EVOH)), protective clothing and eye and face protection.
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse with water.
- In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
- Store in a well-ventilated place. Keep cool.
- Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists get medical attention.
- IF ON SKIN: Wash with plenty of water
- If skin irritation or a rash occurs: Get medical attention.
- Do not breathe mists, gases, vapors and other fumes, or the product itself.
- Do not eat, drink or smoke when using this product.
- If exposed or concerned: Call a POISON CENTER or a physician.
- Store locked up.

Other dangers

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

Health	2
Fire	3
Reactivity	1
Special danger	

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Component	No. CAS	% Weight
Ethanol	64-17-5	63%
Water	7732-18-5	24%
Methanol	67-56-1	10%
Picric acid	88-89-1	2%
Ethyl acetate	141-78-6	0.7%

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. Never give anything by mouth to an unconscious person. Consult a physician.

Most important symptoms and effects (acute and delayed) To our knowledge, the chemical, physical and toxicological properties have not been fully investigated. Ref. section 11. When concentrated, high exposure to the products causes the following main symptoms: Feeling drunk. Dizziness. Vision blurs. Skin, eye and respiratory system irritation. Nausea and vomiting. Fatigue. Diarrhea. Headaches. Gastrointestinal disorders. Yellow stained hair and skin.

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 Do not use a jet of water.

Combustion products Nitrogen oxides (NOx). Hazardous combustion products formed under fire conditions: Formaldehyde. Carbon oxides.

Specific hazards of the dangerous product The dry product is explosive. Highly concentrated vapors in the air can ignite or even explode if exposed to an intense ignition source. Keep the product and empty containers away from heat and ignition sources. 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	Evacuate personnel to safe areas. Cut off all sources of ignition. Use anti-spark tools and anti-explosion equipment. Avoid the accumulation of charges electrostatic. Avoid breathing in vapours, spray mists or gases. 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. Beware of vapors accumulating to form explosive concentrations. Vapours can accumulate in low-lying areas.
Methods and materials for containment and cleaning up	Flush area with large amounts of water. Dispose of residues in a container for disposal of hazardous materials. When handling, wear suitable safety equipment. Discharge into the environment must be avoided.

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Keep container tightly closed in a dry, well-ventilated place. Keep container tightly closed and store away from heat, moisture, and incompatible products (ref. section 10). Keep away from sources of ignition - No smoking. Take measures to prevent the accumulation of electrostatic charges. Protect from the sun's rays. Use venting and electrical equipment that is grounded and does not produce ignition sources (sparks).
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. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. 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.	Value	Control parameters	Basis
Ethanol	64-17-5	TWAEV	1000 ppm 1900 mg/m3	Canada. Ontario OELs
		TWA	1000 ppm 1880mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		VEMP	1000 ppm 1880mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		STEL	1000 ppm	Canada. British Columbia OEL
		TWA	1000 ppm	Canada. British Columbia OEL

Components	CAS-No.	Value	Control parameters	Basis
Methanol	67-56-1	TWA	200.000000 ppm 262.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Substance may be readily absorbed through intact skin			
		STEL	250.000000 ppm 328.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Substance may be readily absorbed through intact skin			
		TWA	200.000000 ppm	Canada. British Columbia OEL
	Contributes significantly to the overall exposure by the skin route.			
		STEL	250.000000 ppm	Canada. British Columbia OEL
	Contributes significantly to the overall exposure by the skin route.			
		TWAEV	200.000000 ppm 262.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	Skin (percutaneous)			
		STEV	250.000000 ppm 328.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	Skin (percutaneous)			
		TWA	200.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	250.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)

Components	CAS-No.	Control parameters	Value	Basis
Picric Acid	88-89-1	TWA	0.100000 mg/m3	Canada. British Columbia OEL
Remarks	Sensitizer: sensitization critical effect			
		TWAEV	0.100000 mg/m3	Canada. Ontario OELs
	Skin			
		STEV	0.300000 mg/m3	Canada. Ontario OELs
	Skin			
		TWA	0.1 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWAEV	0.1 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	0.100000 mg/m3	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
	Skin			
		STEL	0.300000 mg/m3	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
	Skin			

Components	CAS-No.	Value	Control parameters	Basis
Ethyl acetate	141-78-6	TWA	400.000000 ppm 1,440.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		TWA	150.000000 ppm	Canada. British Columbia OEL
		TWAEV	400.000000 ppm 1,440.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	400.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)

Data origin	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. Laminated material (PE/EVOH) 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	Data not available
Odour threshold	Data not available
Melting point and freezing point	Data not available
Boiling point	Data not available
Flammability	Yes
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Flash point	~20 °C (theoretical)
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
pH	Not applicable
Kinematic viscosity	Data not available
Solubility	Data not available
Partition coefficient water/n-octanol	Data not available
Vapour pressure	Data not available
Relative density	Data not available
Vapour density	Data not available
Particle characteristics	Not applicable

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Flammable product, may ignite with source of ignition, if temperature above flash point. May react violently with incompatible substances. May ignite on contact with oxidants if heat and oxygen are present in sufficient quantities. Explosive in the dry state.
Chemical stability	Stable under recommended storage conditions. Air sensitive. Sensitive to heat.
Possibility of hazardous reactions	Explosive when dry. Flammable liquid and vapours. Vapours can form explosive mixtures with air when heated. May react violently with incompatible substances.
Conditions to avoid	Do not allow to dry. Explosive when dry. Chocs sensitive. Sensitive to friction. Avoid contact with incompatible materials and extreme temperatures. Heat, flames and sparks. Avoid the build-up of static electricity.
Incompatible materials	When pure, the products react with the following products: Strong acids. Oxydants. Acid anhydrides. Alkali metals. Reducing agents. Acid chlorides. Oleum. Lithium tetrahydroaluminate. Potassium tert-butoxide. Strong bases. Heat and humidity. Azo compounds. Epoxides. Isocyanates. Nitrides. Reducing agents. Some metals. Iron. Zinc. Copper. And their salts.
Hazardous decomposition products	Formaldehyde. Carbon oxides. Nitrogen oxides (NOx).

SECTION 11 - TOXICOLOGICAL INFORMATION

PICRIC ACID 2.5%W/V (IN DENATURATED ETHANOL 80%)

Routes of exposure	Ingestion, inhalation, skin and eye contact.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
- Skin	Irritation. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
- Inhalation	Irritation of the mucous membranes and respiratory tract. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
Acute toxicity (Ingestion)	Feeling drunk. Headaches. Drowsiness. Incoordination. Nausea and vomiting. Acute absorption can lead to: Blindness. Damage to the liver. Damage to the kidneys. Damage to the eyes. Loss of consciousness. Coma. Possible death. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
Chronic exposure effects / symptoms	Visual troubles. Liver damage. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
DL50 (specify species and route of entry)	ETA Mix (Estimated Acute Toxicity): LD50 Oral - Rat - 3666mg/kg. LD50 Dermal - >5000mg/kg.
CL50 (specify species and route of entry)	ETA Mix (Estimated Acute Toxicity) LC50 Inhalation - 4h - >100 000ppm. Undefined species.

ETHANOL (ABSOLUTE)

Routes of exposure	Ingestion.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation. Tearing
- Skin	Irritation.
Acute toxicity (Ingestion)	Euphoria. Depression of the central nervous system. Headaches. Nausea and vomiting. Dizziness. Incoordination. Speech disorder. Mental confusion. Anesthesia.
Chronic exposure effects / symptoms	Liver cirrhosis. Gastrointestinal system disease. Cardiovascular disease. Nervous system damage. Hematological disease. Respiratory disease.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 7000 mg/kg. LD50 Dermal - Rabbit - >2000mg/kg.
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4 h - 116mg/L. LC50 Inhalation - Mouse - 1 h - 60000 ppm.

METHANOL

Routes of exposure	Ingestion, inhalation, skin and eye contact.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation.
- Skin	Irritation. Dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Narcotic effects. Chest pain. Cough. Dyspnoea. Headaches. Dizziness. Watery eyes. Paresthesia. Nystagmus. Drowsiness. Confusion. Nausea and vomiting.
Acute toxicity (Ingestion)	Mucous membrane irritation. Narcotic effects. Liver and kidney damage. Injury to the eyes. Abdominal pain. Cramps. Diarrhea. Headaches. Dizziness. Paresthesia. Nystagmus. Drowsiness. Incoordination. Acidosis. Nausea and vomiting. Convulsions. Hypotension. Respiratory collapse. Loss of consciousness. Coma. Possible death. Acute absorption can lead to: Blindness. Damage to the liver. Damage to the kidneys. Damage to the eyes. Damage to the heart. Damage to the central nervous system.
Chronic exposure effects / symptoms	Dizziness. Headache. Nausea. Visual troubles. Decrease in visual acuity. Liver damage. Kidney damage.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 1187 mg/kg. LD50 Dermal - Rabbit - 15840 mg/kg.
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4 h - 64000 ppm. LC50 Inhalation - Rat - 4 h - 115.9-130.7mg/L air.

PICRIC ACID (MOISTERED~35%)

Routes of exposure	Ingestion, inhalation and skin contact.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Severe burns and destruction of ocular tissue that can lead to corneal ulceration and blindness.
- Skin	Skin sensitizer. Dermatitis. Severe burns and tissue ulcerations. Desquamation. Yellow stained hair and skin.
- Inhalation	Headaches. Nausea and vomiting.
Acute toxicity (Ingestion)	Nausea and vomiting. Headaches. Diarrhea. Damage to the kidneys. Damage to the liver.
Chronic exposure effects / symptoms	Skin sensitization. Nervous system damage. Kidney damage. Liver damage. Yellow stained hair and skin. Weakness. Digestive problems. Myalgia. Hematuria (blood in the urine). Dermatitis. Conjunctivitis.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 200mg/kg. LD50 Dermal - Data not available.
CL50 (specify species and route of entry)	LC50 Inhalation - Data not available.

ETHYL ACETATE

Routes of exposure	Ingestion, inhalation, skin and eye contact.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Inflammation of the conjunctiva. Can lead to corneal opacity.
- Skin	Irritation. Dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Narcotic effects. Cough. Dyspnoea. Headaches. Dizziness. Drowsiness. Paresthesia. Nystagmus. Nausea and vomiting. Convulsions. Can lead to loss of consciousness.
Acute toxicity (Ingestion)	Mucous membrane irritation. Narcotic effects. Liver and kidney damage. Gastrointestinal disorders. Cramps. Diarrhea. Headaches. Dizziness. Drowsiness. Convulsions. Nausea and vomiting.
Chronic exposure effects / symptoms	Burning sensation. Dermatitis. Conjunctivitis. Narcotic effects. Liver and kidney damage. Chest pain. Cough. Dyspnoea. Laryngitis. Headache. Dizziness. Drowsiness. Nausea and vomiting. Loss of appetite. Weight loss. Paresthesia. Nystagmus. Muscle weakness. Anemia. Leukocytosis.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 5620 mg/kg LD50 Dermal - Rabbit - >2000mg/kg.
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4 h - 4000 ppm. LC50 Inhalation - Mouse - 4 h - 1500 ppm.

SECTION 12 - ECOLOGICAL INFORMATION

PICRIC ACID 2.5%W/V (IN DENATURATED ETHANOL 80%)

Ecotoxicity	Data not available.
Persistence and degradability	Data not available.
Bioaccumulative potential	Data not available.
Mobility in soil	Data not available.
Other adverse effects	Avoid release to the environment.

ETHANOL (ABSOLUTE)

Ecotoxicity	Toxicity to algae: EC50 (72h) (Chlorella vulgaris) - 275mg/l. Toxicity to fish: LC50 - Pimephales promelas (Bighead Minnow) - 14200 mg/l/96h. Toxicity to bacteria: Photobacterium phosphoreum - EC50 - 34634 mg/L/30 min. 35470 mg/L/5 min. Daphnia magna (Water flea) - EC50 - 9268 mg/L/48h. 10800 mg/L/24h.
Persistence and degradability	Persistence is unlikely based on information provided.
Bioaccumulative potential	Data not available.
Mobility in soil	Will likely be mobile in the environment due to its volatility.
Other adverse effects	Data not available.

METHANOL

Ecotoxicity	Toxicity to fish: LC50 - Lepomis macrochirus - 15,400.0 mg/l - 96 h.
Persistence and degradability	Biodegradability aerobic - Readily biodegradable Result: 72%.
Bioaccumulative potential	Bioaccumulation Cyprinus carpio (Carp) - 72 d à 20 °C. Bioconcentration factor (BCF): 1.
Mobility in soil	Do not get absorbed by the ground.
Other adverse effects	Avoid release to the environment.

PICRIC ACID (MOISTERED~35%)

Ecotoxicity	Data not available.
Persistence and degradability	Data not available.
Bioaccumulative potential	Data not available.
Mobility in soil	Data not available.
Other adverse effects	Data not available.

ETHYL ACETATE

Ecotoxicity	Toxicity to fish: LC50 - Oncorhynchus mykiss (rainbow trout) - 350.00 - 600.00 mg/l - 96 h. LC50 - Pimephales promelas (Bighead Minnow) - 220.00 - 250.00 mg/l - 96 h. Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - 2,300.00 - 3,090.00 mg/l - 24 h. LC50 - Daphnia magna (Water flea) - 560 mg/l - 48 h. Toxicity to algae: EC50 - 4,300.00 mg/l - 24 h. EC50 - Selenastrum - 1,800.00 - 3,200.00 mg/l - 72 h.
Persistence and degradability	Readily biodegradable Result: 79%.
Bioaccumulative potential	Bioconcentration factor (BCF): 30.

Mobility in soil	Will likely be mobile in the environment due to its volatility.
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	1992
UN Proper shipping name	LIQUIDE INFLAMMABLE, TOXIQUE, N.S.A.(Éthanol, méthanol, acide picrique)
Transport hazard class(es)	Liquides inflammables 3 Matières toxiques 6.1
Packing group	II
Limited quantity index	1 L
ERAP Index	-
Special precautions	16

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	- Flammable liquids - category 2 - Serious eye damage/eye irritation - Eye irritation - category 2 - Respiratory or skin sensitization - Skin sensitize - category 1 - Specific Target Organ Toxicity - Single exposure - category 1

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.

LAST UPDATE: 2026-03-12