



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

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

Fax. (Qc): (418) 660-8998

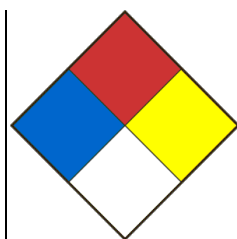
SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier FAM B		Product Use Laboratory use	
Chemical formula -		Product code FS-0202	Molar weight
Chemical name / Commercial name / Synonymous FAM TESTING FLUID (B); METHANOLIC FAM TESTING FLUID (B); METHANOLIC FAM TESTING FLUID			
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 9/26/2019	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	Flammable liquids category 2 Skin corrosion/irritation - Skin irritation category 2 Reproductive toxicity category 2 Specific Target Organ Toxicity - Single exposure category 1 Aspiration hazard category 1 Serious eye damage/eye irritation - Eye irritation category 2
Signal Word	DANGER
Hazards statements (H)	H225 Highly flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H319 Causes serious eye irritation. H361 Suspected of damaging fertility or the unborn child. H370 Causes damage to organs (eyes, heart, liver, kidneys, respiratory system, central nervous system).
Precautionary statements (P)	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P260 Do not breathe dust / fume / gas / mist / vapours / spray. P264 Wash the areas of the body that have been in contact with the product after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/protective clothing/eye protection/face protection. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P311 IF exposed or concerned: Call a POISON CENTER or a doctor. P308 + P313 IF exposed or concerned: Get medical advice/attention. P321 Specific treatment (see section 4 of the SDS and on this label). P331 Do NOT induce vomiting. P332 + P313 If skin irritation occurs: Get medical advice/attention. P337 + P313 If eye irritation persists: Get medical advice/attention. P362 + P364 Take off contaminated clothing and wash it before reuse. P370 + P378 In case of fire: Use water spray or alcohol-resistant foam, or dry powder or carbon dioxide for extinction. P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company.
PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Significant; 4=Extreme)



Health 2
Fire 4
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	46
2,2,4-Triméthylpentane	540-84-1	22
Méthanol	67-56-1	16
Diisobutylène	25167-70-8	12
Éthanol	64-17-5	4
Eau	7732-18-5	0.7
Acétate d'éthyle (comme dénaturant)	141-78-6	<0.05

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	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)	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	Strong oxidizing agents, heat, sparks and open flame. Keep away from heat/sparks/open flame/hot surface. No smoking.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. The water spray will then be used to cool nearby containers.
Unsuitable extinguishing media	Do not use a heavy water stream.
Hazardous combustion / decomposition products	Hazardous decomposition products formed under fire conditions. Carbon oxides.
Special fire and explosion hazards	Steam can travel a great distance and ignite on sources of ignition such as heaters, electrical appliances, cigarettes, sparks, etc. The return flame distance can be considerable. 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).
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. Remove all sources of ignition. Ensure a good ventilation of the premises. When handling, wear appropriate safety equipment. Use a respirator as needed. Avoid breathing vapours, mist or gas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Dilute residues with water, clean and rinse. Dispose of residues in a container provided for the disposal of hazardous materials. Do not let product enter drains.
--	---

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Store in a cool, dry place. Keep container tightly closed and store away from oxidizing agents, heat, moisture and incompatible products. 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.
Methods of handling	Bottle in the glass only. Always open containers slowly to allow any excess pressure to vent. Avoid inhalation of vapour or mist. 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/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Substance may be readily absorbed through intact skin			
		TWAEV	50 ppm 188 mg/m3	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
Components	CAS-No.	Value	Control parameters	Basis
2,2,4-Trimethylpentane	540-84-1	TWA	300.000000 ppm 1,401.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	300.000000 ppm	Canada. British Columbia OEL
		TWA	300 ppm	Canada. British Columbia OEL
		TWA	300.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Components	CAS-No.	Control	Value	Basis
DIISOBUTYLENE	25167-70-8	TLV, TWA, STEL	No data available	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TLV, TWA, STEL	No data available	Canada. British Columbia OEL
		TLV, TWA, STEL	No data available	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants

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.	Value	Control parameters	Basis
Ethyl acetate	141-78-6	TWA	400.000000	Canada.

			ppm 1,440.000000 mg/m3	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 source	Sigma-Aldrich.
Ventilation	Fan.
Respiratory	If work under the hood is not possible, or 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	Liquide incolore.
Odour	Donnée non disponible.
Odour threshold	Data not available
pH	Donnée non disponible.
Melting point / Freezing point	Data not available
Initial boiling point	Data not available
Boiling range	Data not available
Flash point	Entre -10 et 8°C (théorique).
Evaporation rate	Data not available
Flammability	Yes
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Vapour pressure	Data not available
Solubility	Insoluble dans l'eau. Miscible avec l'alcool, l'acétone, le chloroforme et l'éther.
Vapour density	>1 (Air=1) ; (Toluène=3.2)-
Relative density	0.789 (théorique)g/ml
Partition coefficient water/n-octanol	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
Viscosity	Data not available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Non-reactive under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Vapours may form explosive mixture with air.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	Heat, flames, sparks. Avoid the accumulation of static electricity.
Incompatible material	When pure, the products react with the following products: Acids, Oxidants, Acid Chlorides, Acid Anhydrides, Alkali Metals, Reducing Agents. 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. Strong bases.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. Carbon oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

2,2,4-TRIMETHYLPENTANE

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Severe irritation that may cause eye damage.
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. May be harmful if inhaled. Nervous disorders, narcosis, pains in the chest, dizziness, drowsiness, headache, cough, dyspnoea, nausea and vomiting, seizures, coma and death.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Nervous disorders, gastrointestinal disorders, narcosis, headache, vertigo, drowsiness, nausea and vomiting, convulsions, coma and death.
Chronic exposure effects / symptoms	May cause drowsiness or dizziness. The substance or mixture is known to cause a risk of aspirational toxicity in humans or should be considered as if it presented a risk of aspirational toxicity in humans. Burning sensation, dermatitis, conjunctivitis, chest pain, nervous disorders, narcosis, dizziness, dizziness, headache, cough, dyspnoea, laryngitis, loss of appetite, convulsions, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 5000 mg/kg. LD50 Dermal - Rabbit - 2000 mg/kg
CL50 (specify species and route of entry)	CL50 inhalation - Rat 33.52 mg/L - 4 h

DIISOBUTYLENE

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	To our knowledge, the product has not been fully studied.
- Skin	To our knowledge, the product has not been fully studied.
- Inhalation	Irritation of the mucous membranes and respiratory tract.
Acute toxicity (Ingestion)	May be fatal if swallowed and enters airways.
Chronic exposure effects / symptoms	May cause drowsiness or dizziness.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 2000 mg/kg. LD50 Dermal - Rat - 2000 mg/kg
CL50 (specify species and route of entry)	LC50 - Inhalation - Data not available.

ETHANOL (ABSOLU)

Routes of exposure	Ingestion.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and tearing.
- Skin	May cause skin irritation.
- Inhalation	May cause respiratory tract irritation.
Acute toxicity (Ingestion)	Euphoria, a feeling of intoxication, followed by central nervous system depression, which may include headache, nausea, dizziness, incoordination, speech disturbance, mental confusion and of narcosis.
Chronic exposure effects / symptoms	Cirrhosis of the liver and various diseases affecting the gastrointestinal, cardiovascular, nervous, hematological and respiratory systems.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 7000 mg/kg LD50 Dermal - Rabbit - > 2,000 mg / kg
CL50 (specify species and route of entry)	LC50 Inhalation - Mouse - 1h - 60000 ppm.

METHANOL

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	May cause eye irritation.
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Narcotic effects, chest pain, cough, dyspnea, headache, dizziness, watery eyes, paresthesia, nystagmus, drowsiness, confusion, nausea and vomiting.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Narcotic effects, liver, kidney and eye damage, abdominal pain, cramps, diarrhea, headache, dizziness, paresthesia, nystagmus, drowsiness, incoordination, acidosis, nausea and vomiting, seizures, hypotension, respiratory collapse, loss of consciousness, coma and can lead to death. Acute absorption of methanol can cause blindness. Damage to: liver, kidneys, eyes, heart, central nervous system.
Chronic exposure effects / symptoms	Headache, dizziness, nausea, visual disturbances, decreased visual acuity, liver and kidney damage.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 1187 mg/kg LD50 Dermal - Lapin-15840 mg/kg
CL50 (specify species and route of entry)	LC50 Inhalation - Rat: 64000 ppm/4 h. LC50 Inhalation - Rat 115.9-130.7mg/L air / 4h.

TOLUENE

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and tearing.
- Skin	Irritation and dermatitis.
- Inhalation	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 .
Acute toxicity (Ingestion)	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.
Chronic exposure effects / symptoms	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.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 5580 mg/kg. LD50 Dermal - Rabbit - 5000 mg/kg.
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4h - 25.7 - 30 mg/L

SUMMARY

Acute exposure effects / Symptoms:	By exposure routes below.
Ingestion	To our knowledge, the product has not been fully evaluated
Inhalation	To our knowledge, the product has not been fully evaluated
Skin	To our knowledge, the product has not been fully evaluated
Eyes	To our knowledge, the product has not been fully evaluated
Chronic exposure effects / Symptoms:	To our knowledge, the product has not been fully evaluated
ETA Mix (Estimated Acute Toxicity)	LD50 Oral: 4545 mg/kg - Rat LD50 Dermal: > 5000 mg/kg - Undefined species LC50 Inhalation: 38.0 mg/L - 4h - Rat

SECTION 12 - ECOLOGICAL INFORMATION

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

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	1992
UN Proper shipping name	LIQUIDE INFLAMMABLE TOXIQUE, N.S.A.
Transport hazard class(es)	3 Flammable liquids 6.1 Toxic substances
Packing group	II
Limited quantity index	1L
ERAP Index	-
Special precautions	16

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Flammable liquids category 2 Skin corrosion/irritation - Skin irritation category 2 Reproductive toxicity category 2 Specific Target Organ Toxicity - Single exposure category 1 Aspiration hazard category 1 Serious eye damage/eye irritation - Eye irritation category 2
--------------	--

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.

Last Update: 9/26/2019