



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

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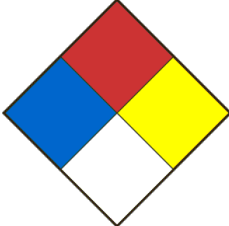
SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier VILLELA'S ETCH (Ethanol)		Product Use Laboratory use	
Chemical formula -		Product code AV-7800	Molar weight
Chemical name / Commercial name / Synonymous Réactif d'attaque Villela's (#80); VILLELA'S ETCH (Ethanol)			
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 7/20/2022	SDS Prepared by Laboratoire MAT		E-Mail labmat@labmat.com

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	<p>Flammable liquids category 2</p> <p>Corrosive to metals-Category 1</p> <p>Serious eye damage/eye irritation - Serious eye damage category 1</p> <p>Specific Target Organ Toxicity - Single exposure category 1</p> <p>Acute toxicity - Inhalation category 4</p> <p>Skin corrosion/irritation - Skin corrosion category 1</p> <p>Respiratory or skin sensitization - Skin sensitize category 1</p>
Signal Word	<p>DANGER</p>
Hazards statements (H)	<p>H225 Highly flammable liquid and vapor.</p> <p>H290 May be corrosive to metals.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H318 Causes serious eye damage.</p> <p>H332 Harmful if inhaled.</p> <p>H370 Causes damage to organs.</p> <p>H317 May cause an allergic skin reaction.</p>
Precautionary statements (P)	<p>P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.</p> <p>P233 Keep container tightly closed.</p> <p>P234 Keep only in original container.</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>P270 Do no eat, drink or smoke when using this product.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.</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 + P311 IF exposed or concerned: Call a POISON CENTER or a doctor.</p> <p>P310 Immediately call a POISON CENTER or doctor/physician.</p> <p>P312 Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P321 Specific treatment (see section 4 of the SDS and on this label).</p> <p>P363 Wash contaminated clothing 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>P390 Absorb spillage to prevent material damage.</p> <p>P403 + P235 Store in a well-ventilated place. Keep cool.</p> <p>P405 Store locked up.</p> <p>P406 Store in a corrosion resistant container / or a container with corrosion resistant liner.</p> <p>P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P362 + P364 Take off contaminated clothing and wash it before reuse.</p>

PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)
	Health 2 Fire 3 Reactivity 0 Special danger

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Éthanol	64-17-5	77.9
Méthanol	67-56-1	12.8
Acide chlorhydrique	7647-01-0	2.7
Acide picrique	88-89-1	0.8
Acétate d'éthyle	141-78-6	0.9
Eau	7732-18-5	5

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	If breathed in, move person into 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)	Main symptoms of high exposure: Skin, eye and respiratory system irritation. Headaches. Blurry vision. Vomiting. Nausea. Feeling drunk. Tiredness. 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. 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. Explosive when dry.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	Do not use a heavy water stream.
Hazardous combustion products	Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx). Hydrogen chloride gas.
Special fire and explosion hazards	When concentrated, the product reacts according to the following characteristics: May explode in shock or if heated above 300 ° C. The dry product is explosive. 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. Cut off all sources of ignition. Avoid the accumulation of charges electrostatic. 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. Avoid breathing vapors, mist or gas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Do not let product enter drains.
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SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Dry residue is explosive. Do not allow to dry, always keep moist. Store in cool place. Protect from the sun's rays. Keep container tightly closed and store away from heat, water, moisture, and incompatible products. Use venting and electrical equipment that is grounded and does not produce ignition sources (sparks). Do not store in metal containers.
Methods of handling	Avoid contact with the skin, eyes and clothes. 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.	Value	Control parameters	Basis
Ethanol	64-17-5	TWAEV	1000 ppm 1900 mg/m ³	Canada. Ontario OELs
		TWA	1000 ppm 1880mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		VEMP	1000 ppm 1880mg/m ³	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/m ³	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/m ³ 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/m ³	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/m ³	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 ppm 1,440.000000 mg/m ³	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/m ³	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)

Components	CAS-No.	Value	Control parameters	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	0.100000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	0.1 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWAEV	0.100000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		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
Hydrochloric acid	7647-01-0	(c)	2.000000 ppm 3.000000 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			
		C	2.000000 ppm	Canada. British Columbia OEL
		C	5.000000 ppm 7.500000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
A substance which may not be recirculated in accordance with section 108				
		(c)	2 ppm 3 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
	C 2 ppm Canada. British Columbia OEL			
		C	5 ppm 7.5 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
A substance which may not be recirculated in accordance with section 108				
		C	2.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		C	2 ppm	USA. ACGIH Threshold Limit Values (TLV)

Data source	Sigma-Aldrich (Millipore Sigma)
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.
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SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid.
Appearance	incolore-
Odour	Aromatique.
Odour threshold	Data not available
pH	Donnée non disponible.
Melting point / Freezing point	-90 (Ethanol denat.)°C
Initial boiling point	Data not available
Boiling range	75- 79 (Ethanol denat.)°C
Flash point	17°C (Estimé).
Evaporation rate	2.0 (Ethanol denat.)-
Flammability	Yes
Lower flammable / Explosive limit	2.2 (Ethanol denat.)%
Upper flammable / Explosive limit	36 (Ethanol denat.)%
Vapour pressure	40.9 @ 20°C (Ethanol denat.)mmHg
Solubility	Miscible avec l'eau, les alcools et l'éther, acétone.
Vapour density	1.6 (Ethanol) (air = 1)-
Relative density	0.79 (Ethanol denat.)g/ml
Partition coefficient water/n-octanol	1.9 (Ethanol denat.)-
Auto-ignition temperature	385 (Ethanol denat.)°C
Decomposition temperature	Data not available
Viscosity	Data not available

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.
Chemical stability	Explosive if dry.
Possibility of hazardous reactions	Stable under normal conditions. Vapors may form explosive mixture with air. Explosive when dry.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	Avoid contact with incompatible materials and extreme temperatures. Heat, flames, sparks. Sensitive to friction. Chocs sensitive.
Incompatible material	When pure, the products react with the following products: Acids, Oxidants, Acid Chlorides, Acid Anhydrides, Alkali Metals, Reducing Agents. Strong bases, reducing agents, heavy metals, heavy metal salts, ammonia. Bases, Amines, alkali metals, metals, permanganates, fluorine, metal acetylides, hexalithium disilicide.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. Carbon oxides. - nitrogen oxides (NOx). - Hydrogen chloride gas Aldehydes. Gaseous chlorine.

SECTION 11 - TOXICOLOGICAL INFORMATION

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.

ETHYL ACETATE

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and conjunctivitis. May cause opacification of the cornea.
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Narcotic effects, cough, dyspnea, headache, dizziness, drowsiness, paresthesia, nystagmus, nausea and vomiting, convulsions and may result in unconsciousness.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Narcotic effects, liver and kidney damage, gastrointestinal disorders, cramps, diarrhea, headache, dizziness, drowsiness, tremors, convulsions, nausea and vomiting.
Chronic exposure effects / symptoms	Chronic poisoning can result in anemia and the appearance of leukocytosis. Burning sensation, dermatitis, conjunctivitis, narcotic effects, liver and kidney damage, chest pain, cough, dyspnea, laryngitis, headache, dizziness, somnolence, paresthesia, nystagmus, muscle weakness, weight loss, and loss of weight. appetite, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 4934 mg/kg. LD50 Dermal - Rabbit - >5000mg/kg
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4h - 4000 ppm. LC50 Inhalation - Mouse - 4h - 1500 ppm

HYDROCHLORIC ACID

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below. The corrosive effect will outweigh the toxicity for the concentrated product.
- Eyes	Severe burns and destruction of ocular tissue that can lead to corneal ulceration and blindness.
- Skin	Severe burns and tissue ulcerations. Perhaps fatal, if the extent of the burns is considerable.
- Inhalation	Spasms, irritation and inflammation of the nose, throat and lungs. Edema of the larynx and bronchi. Chemical pneumonitis and pulmonary edema that can lead to death.
Acute toxicity (Ingestion)	Corrosion and ulceration of the mouth, throat, esophagus, stomach and abdominal wall. Dysphagia, abdominal pain, cramps, diarrhea, melena, hematemesis, possible perforation of the esophagus and stomach, sweating, salivation.
Chronic exposure effects / symptoms	Burning sensation, dermatitis, conjunctivitis, photophobia, lung and eye damage, chest pain, dental enamel abrasion, cough, dyspnoea, laryngitis, tracheobronchitis, headache, dizziness, fever, sweating, salivation, thirst.
DL50 (specify species and route of entry)	LD50 Oral - Rabbit - 900 mg/kg. Dermal 1449 mg/kg-Mouse
CL50 (specify species and route of entry)	LC50 - Inhalation - 3124 ppm/1 h.-Rat

PICRIC ACID (MOISTERED~35%)

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and may result in corneal ulcerations. NOTE: Particles can penetrate the conjunctiva and cause a yellow-finged vision.
- Skin	Irritation. Intense or repeated exposure may cause sensitization dermatitis (yellow skin discoloration, edema, papules, vesicles and desquamations), especially on the sides of the nose and around the mouth.
- Inhalation	Irritation of mucous membranes and respiratory tract. Nervous disorders, cough, dyspnea, headache, anuria followed by polyuria, weakness, myalgia and may lead to unconsciousness.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Abdominal pain, liver and kidney damage, cramps, diarrhea, headache, dizziness, salivation, albuminuria, hematuria, seizures, nausea and vomiting. Severe intoxication can lead to hemolysis (destruction of red blood cells), acute hepatitis and haemorrhagic nephritis.
Chronic exposure effects / symptoms	Burning sensation, dermatitis, conjunctivitis, yellowing of the eyes, skin and hair, cutaneous sensitization, pruritus, nervous disorders, cough, dyspnea, headache, dizziness, sweating, salivation, bitter taste in the mouth, tiredness, weight loss and loss of appetite, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 200 mg/kg. LD50 Dermal - Data not available.
CL50 (specify species and route of entry)	LC50 - Inhalation - Data not available.

SUMMARY

Acute exposure effects / Symptoms:	By exposure routes below.
Ingestion	May cause irritation of the digestive system. Feeling of drunkenness, fatigue, headaches, nausea, vomiting. To our knowledge, the product has not been fully evaluated
Inhalation	May cause respiratory system irritation. To our knowledge, the product has not been fully evaluated
Skin	May cause skin irritation. To our knowledge, the product has not been fully evaluated
Eyes	May cause irritation and damage to 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: 3466 mg/kg - Rat LD50 Dermal: 7925 mg/kg - Undefined species LC50 Inhalation: 19557 ppm - 4h - Undefined species

SECTION 12 - ECOLOGICAL INFORMATION

Available ecological information	No
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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	3286
UN Proper shipping name	LIQUIDE INFLAMMABLE, TOXIQUE, CORROSIF, N.S.A.
Transport hazard class(es)	3 Flammable liquids 6.1 Toxic substances 8 Corrosive substances
Packing group	II
Limited quantity index	1L
ERAP Index	-
Special precautions	16 (éthanol, méthanol, acide chlorhydrique)

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Flammable liquids category 2 Corrosive to metals-Category 1 Serious eye damage/eye irritation - Serious eye damage category 1 Specific Target Organ Toxicity - Single exposure category 1 Acute toxicity - Inhalation category 4 Skin corrosion/irritation - Skin corrosion category 1 Respiratory or skin sensitization - Skin sensitize 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.

Last Update: 7/20/2022