Centre Anti-Poison pour le Québec: (800) 463-5060
Tél. (Qc): (418) 660-8666 / 800-890-8666
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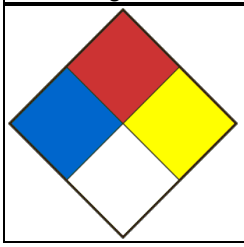
SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier STYRENE (Stabilised)		**Product Use** Laboratory use	
Chemical formula $C_6H_5CH=CH_2$		**Product code** SR-0180	**Molar weight** 104,15
Chemical name / Commercial name / Synonymous STYRENE, STYRÈNE MONOMÈRE, ÉTHENYLBENZÈNE, CINNAMENE, CINNAMOL, PHENETHYLENE, PHENYLETHYLENE, STYROL, STYROLENE, VINYLBENZENE			
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 6/16/2023	**SDS Prepared by** Laboratoire MAT	**E-Mail** labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	Skin corrosion/irritation - Skin irritation category 2 Flammable liquids category 3 Carcinogenicity category 2 Reproductive toxicity category 2 Specific Target Organ Toxicity - Repeated exposure category 1 Aspiration hazard category 1 Acute toxicity - Inhalation category 4 Specific target organ toxicity - Single exposure category 3 Serious eye damage/eye irritation - Eye irritation category 2
Signal Word	DANGER
Hazards statements (H)	H226 Flammable liquid and vapor. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H319 Causes serious eye irritation. H332 Harmful if inhaled. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H361 Suspected of damaging fertility or the unborn child. H372 Causes damage to organs through prolonged or repeated exposure. H335 May cause respiratory irritation.
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 / vapors / spray. P261 Avoid breathing dust / fume / gas / mist / vapors / spray. P264 Wash the areas of the body that have been in contact with the product after handling. P270 Do no eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. 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. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 + P313 IF exposed or concerned: Get medical advice/attention. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P314 Get medical advice/attention if you feel unwell. 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 + P233	Store in a well-ventilated place. Keep container tightly closed.
	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=Signifiant; 4=Extreme)	
	**Health** 2 **Fire** 3 **Reactivity** 2 **Special danger**	

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Styrène 4-tert-butylcatechol (comme stabilisant)	100-42-5 98-29-3	>=99 50ppm

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. 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: Skin, eye and respiratory system irritation. Redness. Nausea and vomiting. Vertigo. Headaches. 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.
Suitable extinguishing media	Water spray, carbon dioxide, dry chemical powder, alcohol or polymer foam.
Unsuitable extinguishing media	Do not use a heavy water stream.
Hazardous combustion products	Hazardous combustion products formed under fire conditions: Carbon monoxide (CO) Carbon dioxide (CO2)
Special fire and explosion hazards	Vapors 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. This product reacts with oxygen above 40°C to form explosive heat sensitive peroxides (oxidation of styrene forms aldehydes and peroxides which can then act as polymerization catalysts). A violent polymerization reaction can be generated by butyllithium, graphite compounds, dibenzoyl peroxide and di-tert-butyl peroxide. 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 / Personnal precautions, protective equipment	Cut off all sources of ignition. Absorb the product with sand or vermiculite. Clean and rinse with water. Ensure a good ventilation of the premises. Dispose of residues in a container provided for the disposal of hazardous materials. When handling, wear appropriate safety equipment. Use a respirator as needed.

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Store in a cool, dry place. Keep container tightly closed and store away from incompatible products, heat, sparks, and open flame. Preferably refrigerate. Protect from sunlight and light. Use venting and electrical equipment that is grounded and does not produce ignition sources (sparks).
Methods of handling	Bottle in the glass preferably.NOTE: this product attacks certain types of plastics and rubbers. Avoid contact with the skin, eyes and clothes. Avoid ingestion and inhalation. 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	No.-CAS	Control parameters	Value	Basis
Styrene	100-42-5	TWA	20ppm 85mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		STEL	40ppm 170mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	20ppm	Canada. British Columbia OEL
		STEL	40ppm	Canada. British Columbia OEL
Remarque:	IARC '2A' applies to substances deemed probably carcinogenic to humans on the basis of limited evidence of carcinogenicity in humans.			
		TWA	35ppm	Canada. Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
		STEL	100ppm	Canada. Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
		TWAEV	50ppm	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		STEV	75ppm	Québec. Regulation respecting occupational health and

				safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants

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.

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid.
Appearance	Liquide clair incolore à jaune.
Odour	Douce.
Odour threshold	0.3ppm
pH	Donnée non disponible.
Melting point / Freezing point	-31°C
Initial boiling point	145-146°C
Boiling range	Data not available
Flash point	31°C
Evaporation rate	0.49%
Flammability	Yes
Lower flammable / Explosive limit	1.1%
Upper flammable / Explosive limit	6.1%
Vapour pressure	4.3 mm @ 15°CmmHg
Vapour density	3.6-
Relative density	0.909g/cm³
Solubility	Très peu soluble dans l'eau 0.32 g/l à 25 °C. Miscible avec l'alcool, l'acétone, l'éther et le méthanol.
Partition coefficient water/n-octanol	0.001-
Auto-ignition temperature	490°C
Decomposition temperature	Data not available
Viscosity	Data not available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	May react violently with incompatible substances. Flammable product, may ignite with source of ignition, if temperature above flash point. In the absence of inhibitor, can polymerize easily.
Chemical stability	May polymerize if heated to the melting point. May polymerize on exposure to light. Unstable after the exhaustion of the inhérent agent.
Possibility of hazardous reactions	Polymerizes easily without inhibitors. Vapors may form explosive mixture with air. Violent and explosive polymerization can be initiated by graphite and alkali metal composites, benzoyl peroxide, di-tert-butyl peroxide, azo bis(isobutyronitrile) and other polymerization catalysts. Exposure of styrene without a polymerization inhibitor to oxygen at a temperature of 40 to 60°C produces an interpolymeric peroxide which, when isolated, can explode under even slight heating. Mixing styrene with an equimolar amount of chlorosulphuric acid, oleum or 96% sulfuric acid in a closed container gives off enough heat to increase the pressure inside the container and cause it to rupture.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	Avoid temperature above 40 ° C. Avoid the accumulation of static electricity.
Incompatible material	Strong oxidizing agents (nitric acid, perchloric acid, peroxides, chlorates and perchlorates), chlorosulfonic acid, sulfuric acid, butyllithium, copper and its alloys, graphite compounds, dibenzoyl peroxide, di-tert-butyl peroxide, oleum, heat, humidity and light.
Hazardous decomposition products	Toxic vapors of carbon monoxide and dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

STYRENE (STABILISED)

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Severe irritation and may result in inflammation of the conjunctiva.
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Narcotic effects, chest pain, cough, dyspnoea, headache, dizziness, drowsiness, salivation, tremors, convulsions, unconsciousness, coma and may cause death.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Abdominal pain, liver and kidney damage, cramps, diarrhea, headache, dizziness, drowsiness, salivation, tremors, nausea and vomiting, convulsions, loss of consciousness, coma and may lead to death.
Chronic exposure effects / symptoms	Is recognized as probably carcinogenic agent for humans (class 2A IARC) - Group 2A. Burning sensation, dermatitis, conjunctivitis, narcotic effects, chest pain, cough, dyspnea, laryngitis, headache, dizziness, drowsiness, confusion, irritability, erythema, tearing, muscle weakness, weight loss and loss of appetite, nausea and vomiting. Prolonged exposure may cause reproductive abnormalities in humans. Prolonged or repeated exposure to this product can cause damage to the following organs: Central nervous system. Skin. Lung. Can cause hearing loss. Eyes.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 2600 mg/kg LD50 Dermal - Rat - >2000 mg/kg
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4h -

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity to fish: Flow-through test - LC50 - Pimephales promelas (fathead minnow) - 10 mg/L - 96h.
Persistence and degradability	Biodegradability aerobic - Duration of exposure 28 days - Result: 70 % - Readily biodegradable.
Bioaccumulative potential	Data not available.
Mobility in soil	Is not likely mobile in the environment due its low water solubility.
Other adverse effects	

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	2055
UN Proper shipping name	STYRÈNE MONOMÈRE STABILISÉ
Transport hazard class(es)	3 Flammable liquids
Packing group	III
Limited quantity index	5L
ERAP Index	-
Special precautions	155

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Skin corrosion/irritation - Skin irritation category 2 Flammable liquids category 3 Carcinogenicity category 2 Reproductive toxicity category 2 Specific Target Organ Toxicity - Repeated exposure category 1 Aspiration hazard category 1 Acute toxicity - Inhalation category 4 Specific target organ toxicity - Single exposure category 3 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.

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