Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment
		 See Section 15.

Section 1. Chemical Product and Company Identification

page Number: 1

c ommon Name/ Trade Name Styrene (monomer)	**Catalog Number(s).** S1683
	CAS# 100-42-5
Coniniercial Name(s) Not available.	**RTECS** WL3675000
	TSCA TSCA 8(b) inventory: Styrene (monomer)
	CI# Not available.
Synonym Vinylbenzene	**CASE OF EMERGENCY CHEMTREC (24hi)**
Chemical Name	CALL +86-371-899916809
(hemical Family Not available.	
Chemical Formula C8H8	

supplier Henan GP Chemicals CO,.LTD

Section 2.Composition and Information on Ingredients

		Exposure Limits			
Name	**CAS#**	**IVA (mg/n?)**	**STEL (mg/ni')**	**CEIL (nig/ni')**	**% by Weight**
1) Styrene (monomer)	100-42-5	213	426		100

Toxicological Data on Ingredients Styrene (monomer): ORAL (LD50): Acute: 2650 mg/kg [Rat]. 316 mg/kc [Mouse]. VAPOR (LC50): Acute: 12000 ppm 4 hour(s) [Rat]. 500 ppm 4 hour(s) [Mouse].

Section 3. Hazards Identification

Potential Acute Ileaith Effects Very hazardous in case of eye contact (irritant). Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation. Inflammation of the eye is characterized by redness, watering, and itching.

Potential (hronic Health Effects CARCINOGENIC EFFECTS: Classified + (PROVEN) by OSHA. Classified 2B (Possible for human.) by IARC. A4 (Not classifiable for human or animal.) by ACGIH. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to the nervous system, upper respiratory tract. Repeated or prolonged exposure to the substance can produce target organs damage.

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Section 4. *First Aid Measures*

Eye C ontact	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open Cold water may be used. Do not use an eye ointment. Seek medical attention.
Skin Contact	After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with ar emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
Inhalation	Allow the victim to rest in a well ventilated area. Seek immediate medical attention.
Serious Inhalation	Not available.
Ingestion	Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Serious Ingestion	Not available.

Section 5. *Fire and Explosion Data*

HHinmabilih of the Product	Flammable.
Auto-Ignition Temperature	490°C (914°F)
Flash Points	CLOSED CUP: 31.1°C (88°F). (Cleveland) OPEN CUP: 36.7°C (98.1 °F) (TAG).
l-'lammable Limits	LOWER: 1.1% UPPER: 6.1%
Products of Combustion	These products are carbon oxides (CO, CO2).
Eire Hazards in Presence of Various Substances	Flammable in presence of open flames and sparks. Slightly flammable to flammable in presence of heat.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Righting Media and Instructions	Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up autoignition or explosion.
Special Remai'ks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section 6. *Accidental Release Measures*

Smail Spill	Absorb with an inert material and put the spilled material in an appropriate waste disposal.
Large Spill	Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and wrth local authorities.

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Section 7. Handling and Storage

Precautions

Keep locked up Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest Do not breathe gas/fumes/ vapour/spray. In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and shew the container or the label. Avoid contact with skin and eyes

Storage

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources o ignition. Keep container tightly closed. Keep in a cod, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

Section 8. Exposure Controls/Personal Protection

Engineering Controk

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation o the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits

TWA: 50 STEL: 100 (ppm)
TWA: 213 STEL: 426 (mg/m^3)

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid. (Clear viscous liquid.)	Odor	Sweetish. Aromatic.
Molecular Weight	104.14 g/mole	I astc	Not available.
pH (1% soln/water)	Not available.	Color	Colorless.
Boiling Point	145.2°C (293.4°F)		
Melting Point	-30.6°C (-23.1 °F)		
Critical Temperature	Not available.		
Specific Gravity	0.906 (Water = 1)		
Vapor Pressure	4.5 mm of Hg (@ 20°C)		
Vapor Density	3.59 (Air=1)		
Volatility	Not available.		
(Mor Threshold	0.1 ppm		
Water/Oil Dist. Coeff.	The product is equally soluble in oil and water; log(oil/water) = 0		
IoniciK (in Water)	Not available.		
Dispersion Properties	Not available.		
SolubiliK	Very slightly soluble in cold water.		

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Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Not available.
Incompatibility with various substances	Not available.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Not available.
Polymerization	No.

Section 11. Toxicological Information

Routes of Entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	**WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OFA4-HOUR EXPOSURE.** Acute oral toxicity (LD50): 316 mg/kg [Mouse]. Acute toxicity of the vapor (LC50): 9500 ppm 4 hour(s) [Mouse],
Chronic Effects on Humans	CARCINOGENIC EFFECTS: Classified + (PROVEN) by OSHA. Classified 2B (Possible for human.) by IARC. A4 (Not classifiable for human or animal.) by ACGIH. The substance is toxic to the nervous system, upper respiratory tract.
Other Toxic Effects on llunians	Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.
Special Remarks on ToxiciK to Animals	Not available.
Special Remarks on (hronic Effects on llunians	Animal embryotoxic. Postnatal development injury in animal. Menstrual disorders in human. Human: passes the placental barrier, detected in maternal milk.
Special Remarks on other 1'oxic Effects on llunians	Not available.

Section 12. Ecological Information

Ecotoxicih	Not available.
BODS and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are more toxic.
Special Remarks on the Products of Biodegradation	Not available.

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Section 13. Disposal Considerations

Waste Disposal

Section 14. Transport Information

DOT Classification	Class 3: Flammable liquid.
Identification	STYRENE MONOMER, STABILIZED:UN2055PG:III
Special Provisions for Transport	Marine Pollutant
DOT (Pictograms)	

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

Pennsylvania RTK: Styrene (monomer)
Florida: Styrene (monomer)
Minnesota: Styrene (monomer)
Massachusetts RTK: Styrene (monomer)
New Jersey: Styrene (monomer)
TSCA 8(b) inventory: Styrene (monomer)
SARA 313 toxic chemical notification and release reporting: Styrene (monomer) CERCLA: Hazardous substances.: Styrene (monomer)

Lamornia Proposition 65 Warnings

Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
Other Classifications	MIM1S (C anada) CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
	)SCL (EEC) R10- Flammable. R38- Irritating to skin. R41- Risk of serious damage to eyes. R45- May cause cancer.
HMIS (U.S.A.)	
WHMIS (Canada)	
DSCL (Europe) (Pictograms)	

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TDG (Canada) (Pictograms)

ADR (Europe) (Pictograms)

Protective Equipment

Gloves.

Lab coat.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

Section 16. Other Information

MSDS Code	**S5030**
References	Not available.
Other Special Considerations	Not available.

Validated by Sonia Owen on 8/11/2006.	**Verified by Sonia Owen.** **Printed 9/14/2006.**

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.