



## SECTION II.

## HAZARDOUS INGREDIENTS

712-3765 (CONT.)

INGREDIENT CAS NO.	WT. PERCENT	WORKPLACE EXPOSURE LIMITS		SOURCE	VAPOR PRESSURE (mm Hg @68F)	LEL
		ppm	mg/m3			

## SECTION III.

## PHYSICAL DATA

BOILING RANGE:	148-415 F	PERCENT VOLATILE BY VOL:	52.86
SPECIFIC GRAVITY	1.092	EVAPORATION RATE (n-Bu Ac=1):	0.43
VAPOR DENSITY (AIR=1):	2.997	VAPOR PRESSURE (mm Hg@68F):	3.60
VOLATILE ORGANIC CONTENT (VOC):	N/A		
APPEARANCE AND ODOR:	light straw-colored solution - styrene odor		
SOLUBILITY IN WATER:	negligible		

## SECTION IV.

## FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	86 DEG. F	SETAFLASH	OSHA CLASSIFICATION:	IC
FLAMMABLE LIMITS % BY VOLUME	IN AIR AT 212 DEG. F:			
LOWER EXPLOSION LIMIT:	2.00			
UPPER EXPLOSION LIMIT:	12.00			

## EXTINGUISHING MEDIA:

Use foam, carbon dioxide or chemical fire fighting apparatus.

## UNUSUAL FIRE AND EXPLOSION HAZARDS

Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Closed containers may explode when exposed to extreme heat.

## SPECIAL FIRE FIGHTING PROCEDURES

The use of self-contained breathing apparatus is recommended for fire fighters. Water spray may be used for cooling containers to prevent possible pressure build-up and auto-ignition or explosion when exposed to extreme heat. Avoid spreading burning liquid with water used for cooling.

## SECTION V.

## HEALTH HAZARD DATA

## THRESHOLD LIMIT VALUE:

See Section II.

## EFFECTS OF OVEREXPOSURE:

## --- EYES CONTACT:

Severe irritation, redness, tearing and blurred vision.

## --- SKIN CONTACT:

Prolonged or repeated exposure can cause moderate irritation, defatting, dermatitis and sensitization.

## --- INHALATION:

Excessive inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea and headache. High concentrations may result in narcosis. (Central Nervous System depression)

## ---- INGESTION:

Can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of material into lungs can cause chemical pneumonitis which can be fatal.

Chronic exposure may cause damage to the Central Nervous System, Respiratory System, Lungs, Eyes, Skin, Gastrointestinal Tract, Liver, Spleen and Kidneys.

## OTHER HEALTH EFFECTS:

Based upon a re-evaluation of previous negative and equivocal data and an increased incidence of lung tumors after oral administration in young adult mice, the International Agency for Research on Cancer (IARC) has listed styrene among those materials for which there is limited evidence for carcinogenicity in animals.

## EMERGENCY AND FIRST AID PROCEDURES

## --- EYES CONTACT:

Flush with clean, lukewarm water for at least 15 minutes, occasionally lifting the eyelids. Obtain medical attention.

## --- SKIN CONTACT:

Remove contaminated clothing. Wash affected skin areas thoroughly with soap and water. Wash contaminated clothing thoroughly before re-use.

## --- INHALATION:

Remove to fresh air. Apply artificial respiration or administer oxygen, if necessary. Call a physician immediately.

## --- INGESTION:

Keep person warm, quiet and get immediate medical attention. Do not induce vomiting, because aspiration of material into the lungs from vomiting can cause chemical pneumonitis which can be fatal.

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SECTION VI.REACTIVITY DATA  
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## STABILITY:

Stable under normal conditions. Avoid exposure to excessive heat.

## INCOMPATIBILITY:

Avoid contact with strong mineral acids, peroxides and polymerization catalysts.

## HAZARDOUS POLYMERIZATION:

Can Occur.

## HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition may yield carbon dioxide and/or monoxide.

## CALIFORNIA SCAQMD RULE 443.1:

This product contains photochemically reactive volatile organic compound(s). Refer to Section II and III.

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SECTION VII.SPILL OR LEAK PROCEDURES  
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## STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Evacuate all non-essential personnel. Remove all sources of ignition. Ventilate the area. Equip employees with appropriate protection equipment (See Section VIII). Dike around spilled material. Cover spill with inert absorbent material and shovel with non-sparking tools into container. Remove containers to a safe area and seal.

## WASTE DISPOSAL METHOD:

Waste material must be disposed of in accordance with federal, state, and local environmental regulatory controls.

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SECTION VIII.SPECIAL PROTECTION INFORMATION  
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## RESPIRATORY PROTECTION:

Avoid breathing vapor or mist. If exposure may or does exceed occupational exposure limits (SEC.IV) use a NIOSH-approved respirator to prevent overexposure. In accord with 29CFR 1910.134 use either a full-face, atmosphere-supplying respirator or air-purifying respirator for organic vapors.

## VENTILATION:

Local exhaust must be sufficient to keep airborne vapor concentrations below the TLV limit. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

## PROTECTIVE GLOVES:

Polyvinyl alcohol gloves.

## EYE PROTECTION:

Splash goggles.

## OTHER PROTECTIVE EQUIPMENT:

Polyvinyl alcohol apron. Eye bath and safety shower. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

## HAZARDOUS MATERIALS IDENTIFICATION SYSTEM:

See first page of MSDS.

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SECTION IX.SPECIAL PRECAUTIONS  
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## PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Drums: Protect against physical damage. Outside or detached

storage preferred.

Bulk: Storage should be in standard flammable liquid storage tanks.

OTHER PRECAUTIONS:

All equipment should be grounded and bonded to reduce static electricity hazard. Use non-sparking tools.

Overexposure to material has apparently been found to cause the following effects in laboratory animals: liver abnormalities, kidney damage, lung damage.

RECENT DATA DOES NOT SUPPORT THE CHANGE IN THE CLASSIFICATION BY IARC OF STYRENE TO BE A SUSPECTED CARCINOGEN.

At the conclusion of a major notice and comment rulemaking revising its air contaminants regulations, OSHA concluded that the "current evidence on styrene's carcinogenicity does not support its classification in the final rule as a carcinogen." 54 Fed. Reg. 2430 (Jan. 19, 1989); see also 54 Fed. Reg. at 2364. In the same rulemaking, the National Institute for Occupational Safety and Health (NIOSH) commented that there "seems to be little basis from the experimental animal investigations or epidemiologic studies to conclude at this time that styrene is carcinogenic." Moreover, other scientists have independently concluded that styrene does not present a carcinogenic risk to humans. I. C. Munro, et al. "A Review of Styrene Pharmacokinetics and Carcinogenicity" (July 21, 1989) (CanTox Inc.) (U.S. EPA Safe Drinking Water Docket No. IID, Document III J2.86, Attachment C).

OTHER COMMENTS

We recommend that containers be either professionally reconditioned for reuse by certified firms or properly disposed of by certified firms to help reduce the possibility of an accident. Disposal of containers should be in accordance with applicable federal, state and local laws and regulations. "Empty" drums should not be given to individuals.

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, expressed or implied, regarding its accuracy or completeness.

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OTHER COMMENTS  
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712-3765 (CONT.)

The conditions of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

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 E N V I R O N M E N T A L D A T A S H E E T  
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\*\*\*\*\* MUST NOT BE DETACHED FROM MATERIAL SAFETY DATA SHEET \*\*\*\*\*

\*\*\* IF MSDS IS COPIED AND REDISTRIBUTED, THIS NOTICE MUST BE ATTACHED \*\*\*

MANUFACTURED BY: Eastman Chemical Company DATE OF LAST CHANGE: 6/29  
 400 East Cottage Place  
 Carpentersville, IL. 60110

PRODUCT NAME: 712-3765  
 PRODUCT CLASS: UNSATURATED POLYESTER RESIN  
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SECTION I. PRODUCT IDENTIFICATION/COMPOSITION  
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PROD	COMPONENT	CAS NUMBER	PERCENT
P	UNSATURATED POLYESTER RESIN	MIXTURE	100
--- TYPICAL DISTRIBUTION OF HAZARDOUS COMPONENTS ---			
1	STYRENE	100-42-5	43.2
2	ALPHA METHYLSTYRENE	98-83-9	.5

SECTION II. SARA TITLE III INFORMATION  
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PROD	EHS RQ (LBS) (*1)	EHS TPQ (LBS) (*2)	SEC 313 (*3)	311/312 CATEGORIES (*4)
P	2,631,579			1 3 4 5
1			YES	1 3 4 5
2			NO	1 3 4 5

----- FOOTNOTES -----

- \*1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SARA SEC.302/304
- \*2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE, SARA SEC.302
- \*3 = TOXIC CHEMICAL, SARA SEC 313
- \*4 = HAZARD CATEGORY FOR SARA SEC. 311/312 REPORTING
  - 1 = FIRE HAZARD
  - 2 = SUDDEN RELEASE OF PRESSURE HAZARD
  - 3 = REACTIVE HAZARD
  - 4 = IMMEDIATE (ACUTE) HEALTH HAZARD
  - 5 = DELAYED (CHRONIC) HEALTH HAZARD

SECTION III. DOT/CERCLA INFORMATION  
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THE CERCLA REPORTABLE QUANTITY (RQ) FOR THIS MIXTURE IS 2,315 LBS.  
 WHICH IS BASED ON THE RQ OF EACH INGREDIENT AND ITS PERCENT IN MIXTURE.

SECTION IV. ADDITIONAL REGULATORY INFORMATION  
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THE POLYMER AND ALL COMPONENTS OF THIS PRODUCT ARE PRESENT ON THE UNITED STATES TOXIC SUBSTANCES CONTROL ACT (TSCA) CHEMICAL SUBSTANCES INVENTORY.

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