

MATERIAL SAFETY DATA SHEET

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HI-BOND STYRENE

MSDS Number: 701930

SECTION I - IDENTIFICATION

TRADE NAME: HI-BOND STYRENE
DESCRIPTION: Styrene Monomer
PRODUCT NUMBER: 1930

HMIS RATING: H2 F3 R2

The percent by weight composition data given in Sections II and X are NOT SPECIFICATIONS, but are based on 'target' formula values for each ingredient in the product. The data are presented as ranges for low hazard ingredients and single point values for ingredients of regulatory concern. Actual batch concentrations will vary within limits consistent with separately established product specifications.

SECTION II INGREDIENTS

CAS# 000100-42-5 PCT BY WT: 100.0000
STYRENE MONOMER 4.500 MMHG 'to 68F
VAPOR PRESSURE:
EXPOSURE LIMIT: 20 PPM (85 MG/CU.M.)
ACGIH TLV/TWA: 40 PPM (170 MG/CU.M.)
ACGIH TLV/STEL: 50 PPM (8 HR TWA)
OSHA PEL/TWA: OSHA ACCEPTABLE CONCENTRATION: 100 PPM (15 MIN TWA) 4.37
PEL/STEL: LD50, Oral: G/KG (RAT)
LD50, Dermal: >5 G/KG (RABBIT)

OTHER LIMITS:

IARC - Group 2B See Section V

This product contains one or more reported carcinogens or suspected carcinogens which are noted by NTP, IARC, or OSHA-Z in the appropriate subsection above under OTHER LIMITS.

This substance is classified as a hazardous air pollutant.

SECTION III PHYSICAL DATA

Boiling Range: High- -N/A F Low-293.0 F
Vapor Pressure: See Section II
Theoretical Weight per Gallon, Calculated: 7.5300 LB/GL
Theoretical Specific Gravity, Calculated: .905
Theoretical VOC, Calculated: 7.530 LB/GL

--If applicable, see Section X for further VOC information-Physical

State: LIQUID

Appearance: CLEAR, COLORLESS
Odor: CHARACTERISTIC STYRENE
Odor Threshold: -N/A
pH: -N/A
Freezing Point: -N/A
Water Solubility : INSOLUBLE
Coefficient of Water/Oil Distribution: -N/A
Mechanical Impact Explosion: NO KNOWN HAZARD
Static Electricity Explosion: AVOID STATIC CHARGE %
HAP BY WEIGHT 100.000
% MONOMER BY WEIGHT 100.000

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CHARACTERISTICS:

Lowest Closed Cup Flashpoint: 88.0 degrees F
For Flash Points 73 to 100 deg. F.
OSHA Flammability- Classification: Class IC
DOT Flammability Classification: Flammable Liquid
Lower Flammable Limit in Air: Lower-I.1 % by volume DOT
Shipping Name:
STYRENE MONOMER, STABILIZED, 3, UN2055, PG III

EXTINGUISHING MEDIA:

Foam, carbon dioxide, dry chemical, water fog.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

If polymerization takes place in a container, there is possibility of violent rupture of the container. Vapors are uninhibited and may form polymers in vents or flame arrestors of storage tanks resulting in stoppage of vents. Vapors may cause flash fire. Keep containers tightly closed and isolate from heat, electrical equipment, sparks and flame. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

SPECIAL FIRE FIGHTING PROCEDURES:

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat.

SECTION V HEALTH HAZARD DATA

EFFECTS OF EXCESSIVE OVEREXPOSURE. PRIMARY

ROUTES OF ENTRY ARE:

EYE CONTACT:

Irritation. Symptoms are tearing redness and discomfort.

SKIN CONTACT:

Irritation. Can cause defatting of skin which may lead to dermatitis.

INHALATION:

Irritation to nose and throat. Extended or repeated exposure to concentrations above the recommended exposure limits may cause brain or nervous system depression, with symptoms such as dizziness, headache or nausea and if continued indefinitely, loss of consciousness, liver and kidney damage. Reports have

Associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

INGESTION:

May cause mouth, throat, esophagus and stomach irritation, nausea, vomiting and diarrhea. Aspiration into lungs can cause pneumonitis which can be fatal.

MEDICAL CONDITIONS THAT MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

Preexisting eye, skin, liver, kidney and respiratory disorders.

EMERGENCY AND FIRST AID PROCEDURES:

In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention: for skin, wash thoroughly with soap and water. If affected by inhalation of vapors or spray mist, remove to fresh air. If swallowed, get medical attention immediately. Aspiration into lungs can cause pneumonitis which can be fatal.

CALIFORNIA PROPOSITION 65 INFORMATION: WARNING - This product contains a chemical(s) known to the State of California to cause cancer.

OTHER HEALTH HAZARDS:

STYRENE MONOMER

The International Agency for Research on Cancer (IARC) has reclassified styrene as Group 2B "possibly carcinogenic to humans". This new classification is not based on new health data relating to either humans or animals, but on a change in the IARC classification system. The Styrene Information and Research Center does not agree with the reclassification and has published the following statement. "Recently published studies tracing 50,000 workers exposed to high occupational levels of styrene over a period of 45 years showed no association between styrene and cancer, no increase in cancer among styrene workers (as opposed to the average among all workers), and no increase in mortality related to styrene." An increased incidence of lung tumors was observed in mice from a recent inhalation study. The relevance of this finding is uncertain. Data from other long-term animal studies and from epidemiology studies of workers exposed to styrene do not provide a basis to conclude that styrene is carcinogenic. Lung effects have been observed in the mouse following repeated exposure to styrene.

SECTION VI REACTIVITY DATA -----

-----STABILITY:

Stable HAZARDOUS POLYMERIZATION: May occur.

CONDITIONS TO AVOID:

Elevated temperatures.

INCOMPATIBILITY (MATERIALS TO AVOID):

Oxidizers, reducing agents, peroxides, strong acids, bases, UV light, or any source of free radicals and mild steel.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition or combustion can produce Mmes containing organic acids, carbon dioxide and carbon monoxide.

SECTION VII SPILL OR LEAK PROCEDURES -----

-----STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Remove all sources of ignition (flames, hot surfaces, and electrical, static, or fictional sparks). Avoid breathing vapors. Ventilate area. Contain and remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD:

Dispose of in accordance with local, state and federal regulations. Do not incinerate closed containers. Incinerate in approved facility.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Do not breathe vapors or spray mist. Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during application and other use of this product until vapors and mists are exhausted, unless air monitoring demonstrates vapor and mist levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. OSHA Standard 29CFR 1910.134.

VENTILATION:

Provide general clean air dilution or local exhaust ventilation in volume and pattern to keep the air contaminant concentration below the lower explosion limit and below current applicable exposure limits. Refer to OSHA Standard 1910.94.

NOTE:

Heavy solvent vapors should be removed from lower levels of the work area and all ignition sources (nonexplosion-proof motors, etc.) should be eliminated.

PROTECTIVE GLOVES:

Use solvent impermeable gloves to avoid contact with product.

EYE PROTECTION:

Do not get in eyes. Use safety eyewear with splash guards or side shields, chemical goggles, face shields.

OTHER PROTECTIVE EQUIPMENT:

Avoid contact with skin. Use protective clothing. Prevent contact with contaminated clothing. Wash contaminated clothing, including shoes, before reuse.

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Do not store above 100 deg. F. Store large quantities in buildings designed to comply with OSHA 1910.106. Keep away from heat, sparks and flame. Keep containers closed when not in use and upright to prevent leakage.

OTHER PRECAUTIONS:

Containers should be grounded when pouring. Do not take internally. Wash hands after using and before smoking or eating. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks and flames. Do not cut, puncture or weld on or near emptied containers. Follow all hazard precautions given in this data sheet until container is thoroughly cleaned or destroyed. If this product is blended with other components such as thinners, converter, colorants and catalysts prior to use, read all warning labels. Any mixture of components will have hazards of all components. Follow all precautions. If spraying this material, keep spray booths clean. Avoid buildup of spray dust or overspray in booths or ducts. KEEP OUT OF REACH OF CHILDREN FOR INDUSTRIAL USE ONLY

SECTION X Sara Title III Information -----

SARA 313 INFORMATION:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: STYRENE MONOMER
CAS# 000100-42-5 PCT BY WT: 100.0000

DISCLAIMER AND LIMITATION OF LIABILITY

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