

Suzanne Miller

BREWER SCIENCE INC.
SAFETY DATA SHEET

This Material Safety Data Sheet has been prepared to comply with the EC Directive, Canadian WHMIS and the OSHA Hazard Communication Standard.

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION
AND THE COMPANY/UNDERTAKING

Product Name: EXP03035

Manufacturer: Brewer Science, Inc.
2401 Brewer Drive
Rolla, MO 65401

Information Phone Number: (573) 364-0300

Fax: (573) 368-3318

Emergency Phone Number: (800) 255-3924

MSDS Date of Preparation: 06/06/03

Product Use: Protective Coating

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS# / EINECS#	%	EU Classification (67/548/EEC)
Xylene	1330-20-7 / 215-535-7	80-95	Xn R10, R20/21, R38
Polymer	Proprietary	5-15	Not applicable

See Section 16 for further information on EU Classification.

SECTION 3: HAZARDS IDENTIFICATION

Clear liquid with an aromatic odor.

EMERGENCY OVERVIEW: Flammable liquid and vapor. May cause eye, skin, and respiratory irritation. May cause headache, dizziness, nausea and other symptoms of central nervous system depression. May be harmful if absorbed through the skin. Harmful or fatal if swallowed. Prolonged overexposure may cause liver and kidney damage. May cause adverse reproductive and developmental effects based animal data.

EU Preparation Classification (1999/45/EC): Flammable Harmful (Xn) R10, R20/21, R38, R65

SECTION 4: FIRST AID MEASURES

Eye: Rinse thoroughly with water for at least 15 minutes, holding the eye lids open to be sure the material is washed out. Get immediate medical attention.

Skin: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation or symptoms of exposure develop. Launder clothing before re-use.

Inhalation: Remove victim to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

Ingestion: Aspiration Hazard. Do not induce vomiting. Keep the victim calm and warm. Get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: 27°C (81°F)

Flammable Limits:

LEL: 1.1 vol %

UEL: 7.0 vol %

BSI Document No. F.7.6.1763.A

Page 1 of 5

Effective Date: 06/06/03

Extinguishing Media: Use water fog or spray, foam, carbon dioxide or dry chemical. Do not use solid stream of water. Xylene is insoluble and lighter than water and can create a floating fire hazard.

Special Fire Fighting Procedures: Wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water.

Unusual Fire Hazards: Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Vapors may form explosive mixtures with air in confined areas.

Hazardous Decomposition Products: Oxides of carbon, hydrocarbon fragments, dense smoke.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill: Remove all ignition sources such as open flames, spark producing equipment, pilot lights, etc. Wear appropriate protective clothing to prevent eye and skin contact including impervious gloves, safety goggles and respirator if needed. Ventilate area. Cover with and inert absorbent material and collect into an appropriate container for disposal. Report spills and releases as required to appropriate authorities.

SECTION 7: HANDLING AND STORAGE

Handling: Avoid breathing vapors, aerosols and mists. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Always wear impervious gloves, chemical safety goggles and protective clothing when handling this material. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.

Storage: Store in a cool, dry, well-ventilated location away from incompatible materials. Keep containers closed when not in use.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	Exposure Limits
Xylene	100 ppm TLV-TWA, 150 ppm TLV-STEL
	100 ppm PEL-TWA
	100 ppm DFG MAK
	50 ppm EU-TWA, 100 ppm EU-STEL skin
Polymer	None Established (PEL/TLV)

Ventilation: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits. Use explosion proof electrical equipment and wiring where required.

Respiratory Protection: If needed, a NIOSH approved respirator with organic vapor cartridges may be used. For higher exposures (greater than 10 times the TLV), a supplied air respirator may be required. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.

Skin Protection: Impervious gloves are recommended. Based on available test data, Teflon or Viton gloves are suggested.

Eye Protection: Chemical safety goggles recommended.

Other Protective Equipment: Impervious clothing is required to prevent skin contact and contamination of personal clothing. An eye wash facility and safety shower should be available in the work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Liquid with an aromatic odor.

pH: Not available

Boiling Point: 138-142°C

Vapor Pressure: 6.7 mmHg @ 21°C

Vapor Density: 3.7

Specific Gravity: Not available

Melting Point: Not Applicable

Water Solubility: Insoluble

Evaporation Rate: 0.7 (Buac=1)

SECTION 10: STABILITY AND REACTIVITY

Stability: **Stable:** X **Unstable:**

Incompatibility/Conditions to Avoid: Strong acids, acetic acid, nitric acid, strong oxidizing agents. Keep away from heat, sparks, flames and other sources of ignition.

Hazardous Decomposition Products: Combustion will produce oxides of carbon, hydrocarbon fragments, dense smoke.

Hazardous Polymerization: **May Occur:** **Will not occur:** X

SECTION 11: TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eye: May cause eye irritation. Corneal injury is possible.

Skin: May cause irritation, drying, cracking and defatting. Xylene may be absorbed through the skin causing effects similar to inhalation.

Inhalation: Inhalation of vapors, mists, or aerosols may cause nose and throat irritation with central nervous system depression. Symptoms of central nervous system depression include headache, dizziness, drowsiness, nausea and unconsciousness. Extreme overexposure may result in chemical pneumonitis, pulmonary edema, kidney and liver damage.

Ingestion: Swallowing may cause gastrointestinal irritation with nausea, vomiting and diarrhea and central nervous system depression with symptoms similar to those described under inhalation. Aspiration of product into the lungs during ingestion or vomiting may cause lung damage which may be fatal.

Chronic Hazards: Chronic exposure may cause dermatitis, reversible eye damage, nervous system effects, anemia, bone marrow effects, liver and kidney damage. Xylene has been found to cause embryotoxicity and fetotoxicity in laboratory animals.

Carcinogen Status: None of the components of this product are listed as carcinogens by OSHA, IARC or NTP.

Medical Conditions Aggravated by Exposure: Pre-existing skin, eye, liver, kidney, liver and blood diseases.

Acute Toxicity Values:

Xylene: Oral rat LD50 - 4300 mg/kg

 Skin rabbit LD50 - >1700 mg/kg

 Inhalation rat LC50 - 5,000 ppm/4 hr

Polymer: No toxicity data available

SECTION 12: ECOLOGICAL INFORMATION

Xylene: LC50/96 hour values for goldfish is 13 mg/L; rainbow trout 8.05 mg/L, fathead minnow 16.1 mg/L. EC50/48 hour value for daphnia 3.82 mg/L.

SECTION 13: DISPOSAL INFORMATION

Dispose in accordance with all local, state and federal regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Shipping Name: Xylene Solution ERG #130
DOT Hazard Class: 3, PG III
UN Number: UN1307
DOT Labels Required (49CFR172.101): Flammable Liquid (See 173.120 for domestic shipment exemption for combustible liquids)
Hazardous Substance (49CFR172.101): Xylene
Reportable Quantity: Product 95 lbs

IATA Shipping Name: Xylene Solution)
IATA Hazard Class: 3, PG III
UN Number: UN1307
IATA Hazard Labels Required: Flammable Liquid

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

CERCLA 103 Reportable Quantity: Product 95 lbs (Xylene 100 lbs).

SARA TITLE III:

Hazard Category for Section 311/312: Acute Health, Chronic Health, Fire Hazard

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: Xylene CAS#1330-20-7 80-95%

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: : All of the components of this product are listed on the TSCA inventory.

STATE REGULATIONS:

California Proposition 65: These products contain the following substances known to the State of California to cause cancer and/or reproductive harm: None

INTERNATIONAL REGULATIONS:

European Community Labeling :

Contains Xylene



R10 Flammable
R20/21 Harmful by inhalation and in contact with skin.
R38 Irritating to skin.
R65 Harmful: may cause lung damage if swallowed.
S16 Keep away from sources of ignition – NO SMOKING.
S24 Avoid contact with skin
S36/37 Wear suitable protective clothing and gloves.
S51 Use only in well ventilated areas.
S60 This material and its container must be disposed of as hazardous waste.

SECTION 16: OTHER INFORMATION

HMIS Ratings: Health – 2*

Flammability - 3

Reactivity - 0

NFPA Ratings: Health - 2

Flammability - 3

Reactivity - 0

EU Classes and Risk Phrases for Reference (See Sections 2 and 3):

Xn Harmful

R10 Flammable

R20/21 Harmful by inhalation and in contact with skin.

R38 Irritating to skin.

R65 Harmful: may cause lung damage if swallowed.

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This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. Brewer Science shall not be held liable for any damage resulting from handling or from contact with the above product.