

PRODUCT NAME: Clear Urethane Hardener

HMIS CODES: H F R P  
3\*3 1 X

PRODUCT CODE: 66-13333

===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: Pruett-Schaffer Chemical Co.  
ADDRESS: 3327 Stafford Street Pittsburgh PA 15204  
EMERGENCY PHONE: 1-800-633-8253 INFORMATION PHONE: 1-412-771-2000  
REVISION DATE: 02/02/05 NAME OF PREPARER: Robert P. Barry

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP Deg F	WEIGHT PERCENT
Toluene Diisocyanate Prepolymer OSHA PEL: None established	NOT AVAIL.	0 0	35.99
Polymeric Hexamethylene Diisocyanate OSHA PEL: None established	28182-81-2	0 0	35.56
Ethyl Acetate (ethyl ethanoate) ACGIH TLV: 400ppm TWA, OSHA PEL: 400ppm TWA	141-78-6	86 68	12.11
n-Butyl Acetate (butyl ethanoate) ACGIH TLV: 150ppm TWA, 200ppm STEL. OSHA PEL: 150ppm TWA.	123-86-4	8 68	6.06
* Xylenes, (o-, m-, & p-dimethyl benzene isomer mix) OSHA PEL: 100ppm TWA, 150ppm TWA STEL. ACGIH TLV: 100ppm TWA, 150ppm STEL.	1330-20-7	25 77	5.88
silane ACGIH TLV: DOW CORN., OSHA PEL: recommend., Other TLV: 5ppm TWA	not avail.	0 0	3.12
* Toluene Diisocyanate (TDI), 2,4- and 2,6- isomers ACGIH TLV: .005ppmTWA, OSHA PEL: .005ppmTWA, Other TLV: .02ppmSTEL	1321-38-6	.025 77	0.34
* Ethyl Benzene OSHA: 100ppm TWA, 125ppm TWA STEL	100-41-4	0 0	0.18

\* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

LEGEND: (C)=Ceiling limit; (S)=Skinlimit; (STEL)=Short Term Exposure Limit; (Mppcf)=Million Particles Per Cubic Foot; (TWA)=8 HR Time Weighted Average.

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING RANGE: 167 deg F - 484 deg F SPECIFIC GRAVITY: 1.12  
VAPOR DENSITY: Heavier than air. EVAPORATION RATE: Slower than ether.  
COATING VOC: 2.26 lb/gl MATERIAL VOC: 2.26 lb/gl  
ORGANIC SOLVENT, PERCENT BY WEIGHT: 24.221  
ORGANIC SOLVENT, PERCENT BY VOLUME: 31.032  
COATING DENSITY, LB/GAL: 9.326  
SOLUBILITY IN WATER: Insoluble.  
APPEARANCE AND ODOR: Viscous, opaque liquid with a paint thinner-like odor.

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: -4 deg F METHOD USED: TCC  
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: .9 UPPER: 10.7

EXTINGUISHING MEDIA: Foam, alcohol foam, CO2, dry chemical, water fog.

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus and full protective clothing. Keep onlookers away. Dike runoff to prevent entry

into sewers, storm drains, and watercourses. Use caution after fire is extinguished, vapors or liquid may reignite. Notify appropriate state and local agencies.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Pressure may build up in tightly closed containers exposed to fire which may result in rupture. Keep containers cooled with water spray. Do not reseal containers that have been contaminated with water; CO2 may be generated which may burst the container. Toxic fumes may persist in area after fire is extinguished. Contaminated turnout gear may have to be cleaned.

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SECTION V - REACTIVITY DATA  
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STABILITY: Stable

CONDITIONS TO AVOID: Sources of ignition, poor ventilation, corrosive atmospheres or liquids which may damage containers.

INCOMPATIBILITY (MATERIALS TO AVOID): Water, alcohols, amines, strong acids and bases, metal compounds, surface active agents, and phosphorus compounds.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Thermal decomposition may yield carbon dioxide, carbon monoxide, oxides of nitrogen, hydrogen cyanide, and toluene diisocyanate.

HAZARDOUS POLYMERIZATION: Will not occur. May occur. Contact with moisture or other materials which react with isocyanates, or heat above 400 deg F may cause polymerization, resulting in generation of heat and/or carbon dioxide gas.

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SECTION VI - HEALTH HAZARD DATA  
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INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Inhalation of isocyanate vapor above the TLV of .005 ppm may cause irritation of the respiratory tract, dryness of the throat, tightness in the chest. Effects of solvent exposure vary among individuals and may include headache, dizziness, nausea, irritation of the nose, throat, and respiratory tract, and incoordination. Severe solvent overexposure may produce anesthesia or unconsciousness.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Eye contact may cause irritation, redness, and tearing, stinging sensation, and blurred vision. Skin contact may cause irritation, redness, swelling, rash, scaling, or blistering. In severe cases skin sensitization is possible and allergic dermatitis may result.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Ingestion can cause gastrointestinal irritation, vomiting, nausea, and diarrhea. Can result in possible corrosive action in the mouth, stomach, and intestines. Aspiration may result in chemical pneumonitis. LD50 > 10000 mg/kg (rat).

HEALTH HAZARDS (ACUTE AND CHRONIC): ACUTE: chest discomfort, coughing, shortness of breath, reduced lung function, or asthma-like symptoms. A single exposure well above the TLV may cause bronchitis, bronchial spasm, and pulmonary edema (fluid in lungs). These effects are reversible.

CHRONIC: repeated overexposure or a single large dose may produce sensitization (chemical asthma) to isocyanates or other irritants. Decrease in lung function may be permanent. Chronic overexposure to solvents may cause central nervous system damage.

CARCINOGENICITY: NTP: Yes IARC MONOGRAPHS: Yes OSHA REGULATED: No

CHRONIC EFFECTS OF ETHYLBENZENE OVEREXPOSURE

The International Agency for Research on Cancer (IARC) has evaluated ethylbenzene (a component of xylol) and classified it as a possible human

carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Overexposure may aggravate asthma, bronchitis, pre-existing specific isocyanate hypersensitivity, anesthesia, chronic respiratory tract disease, or skin allergies.

EMERGENCY AND FIRST AID PROCEDURES: INHALATION OVEREXPOSURE: Remove person to fresh air. If breathing stops, apply artificial respiration and oxygen and seek immediate medical attention. Asthmatic-like symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. NOTE: Use supplied-air respirator for rescue in enclosed areas.

EYE CONTACT: Flush with large amounts of tepid water for at least 15 minutes and seek immediate medical attention.

INGESTION: Do not induce vomiting, if aspirated material can cause chemical pneumonitis or pulmonary edema. Drink 2 glasses of milk or water to dilute and contact physician or poison center.

SKIN: Wash with soap and water, avoid repeated contact.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Evacuate nonessential personnel. Dike to prevent entry into sewers or surface waters. Recover free liquid by shoveling into container using non-sparking tools, or add absorbent such as sand or earth to spill and sweep up. Provide ventilation, wear a respirator. Notify proper authorities if spill contaminates land or waterways.

WASTE DISPOSAL METHOD: Cover spill with absorbent material, pour on decontamination solution (a dilute solution of ammonia and water) and let react for 10 minutes. Shovel material into an open top container and add more decontamination solution. Remove containers to a safe place, cover loosely, and let stand for 48 hours. Wash down spill area with soapy water. Dispose of all waste in chemical landfill or incinerate assuring conformity to all applicable local, state, and federal governing regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store inside away from extreme temperature variations, preferably between 32-122 deg F. Protect containers from physical damage. Keep containers tightly closed when not in use. Do not inhale vapors or mists, use with adequate ventilation and wear a respirator. Train and educate all workers handling and using this product, it is required by law.

OTHER PRECAUTIONS: Do not cut, weld, grind, drill, solder, or braze on or near containers whether full or empty. Do not reuse containers without professional reconditioning and testing. Do not remove warning labels from containers. Do not eat or smoke while handling. Solvent vapors are heavier than air and may accumulate in low areas in the workplace, use caution when entering low or confined areas. Note to industrial health professionals: medical supervision of employees who handle isocyanates is recommended. This should include pre-employment and periodic respiratory function tests (FEV and FVC minimum). Once a person is diagnosed with specific hypersensitivity to isocyanates, no further exposure can be permitted.

Exhaust air in workplaces where isocyanates are used may need to be cleaned by

filters and/or scrubbers to reduce environmental contamination. Refer to Patty's "Industrial Hygiene and Toxicology", Vol 1 and Vol 3.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION: Using this product in poorly ventilated areas may require the use of a respirator. Use Mine Safety Appliance respirator #475217 positive pressure supplied air respirator (or equivalent) if air monitoring demonstrates that the concentration of isocyanates exceeds the recommended TLV's. Solvent concentrations should be considered in determining the type of respirator used.

VENTILATION: Use good general mechanical ventilation and local exhaust adequate to reduce the concentration of vapors or mists of the listed hazardous materials to below the Threshold Limit Value(s) and the Lower Explosion Limit. Ventilation equipment must be explosion proof. Refer to "Industrial Ventilation" published by the American Conference of Governmental Industrial Hygienists.

PROTECTIVE GLOVES: Use of gloves is recommended, use chemically resistant type such as Edmont 4-412 or equivalent. Do not rely on leather gloves.

EYE PROTECTION: Use is recommended, use splash goggles or full face shields as necessary. Do not wear contact lenses while handling.

OTHER PROTECTIVE CLOTHING: Use impervious apron or coveralls to prevent contaminating street clothes which may result in prolonged exposure. The use of head caps or helmets is recommended.

WORK AND HYGIENIC PRACTICES: Eye washes and safety showers in the workplace are recommended. Practice good industrial hygiene when using this product: After using this product, do not smoke or eat until washing thoroughly. Remove saturated clothing or shoes at once and launder before reuse.

===== SECTION IX - MISCELLANEOUS =====

DOT INFORMATION:

UN/NA ID No.: UN 1263  
DOT HAZARD CLASS: 3 (Flammable Liquid)  
PACKING GROUP: II  
DOT HAZARDOUS MATERIAL PROPER SHIPPING NAME: Flammable Liquid, Paint

DISCLAIMER:

The information and recommendations contained herein were believed to be accurate at the time of preparation or obtained from sources believed to be generally reliable. Direct testing of this product under all conceivable conditions of use has not been done. Information given herein is given in good faith, however Pruett-Schaffer Chemical Corporation makes no warranty concerning its accuracy and will not be held liable for claims relating to any party's use of or reliance on this information.