MAGNET PAINT & SHELLAC CO., INC. • 336 Bayview Avenue • Amityville, NY 11701 • (631) 842-7700

24 Hour Emergency Telephone: CHEMTEL 1-800-535-5053

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

| | | .1200 (THE HAZARD COMMUNICATION STANDARD) |
|--|---|--|
| PREPARED: 04/15/95 | LAST REVISED: 6/27/9 | |
| | SECTION 1 - PRO | DDUCT IDENTIFICATION |
| Product Trade Name Product Code Product Class Shipping Classification DOT Hazard Classification | : 79HS : Paint : Paint - Flammable Lic | |
| | SECTION 2 - HAZ | ZARDOUS INGREDIENTS |
| INGREDIENT NAME /CAS NUMBER | EXPOSURE LIMITS | S CONCENTRATION (%) |
| | | |
| averaged over 15 minutes) | | .5 mg/m3 (TWA - averaged over 8 hours) and 1.0 mg/m3 Short Term Exposure (STEL |
| Hexamethylene Diisocyanate (HDI) | OSHA: Not Established ACGIH: .005 ppm TW | |
| a maximum of 1.6%. A ceiling level of 0.02 p | om is recommended | of manufacture. However, after 3-6 months storage, the free monomer content may rise |
| | OSHA: I ACGIH: I | |
| | SECTION 3 - PE | HYSICAL PROPERTIES |
| PHYSICAL FORM COLOR ODOR MOLECULAR WEIGHT BOILING POINT MELTING/FREEZING POINT SOLUBILITY IN WATER SPECIFIC GRAVITY BULK DENSITY % VOLATILE BY VOLUME VAPOR PRESSURE | : Clear/Pale Yellow: of Solvent: Approx. 500 (polyisocyana: Not established: Resin is insoluble - reacts s: 1.04 @ 68 F (20 C): 8.70 lbs/gal: Approximately 30%: Polyisocyanate: Approx. 7.: Xylene: 9 mm Hg @ 20 C | slowly with water to liberate C02 gas. .5 x 10-5 mm Hg @ 20 C |
| | SECTION 4 - FIRE | E AND EXPLOSION DATA |
| fire, HDI vapors and other irritating, highly toxic gase | : 7.0 Xylene: 1.0 Xylene: Dry Chemical; Carbon Dioxide; Fo: Full emergency equipment with selfs s may be generated by thermal decomp extreme heat or burst when contamin | oam; Water spray for large fires. If-contained breathing apparatus and full protective clothing should be worn by fire fighters. During a nosition or combustion. (See Section VIII.) Isolate from heat, electrical equipment, sparks and open inated with water (C02 evolved). Solvent vapors may be heavier than air. Stagnant air may cause vapors |

SECTION 5 - HUMAN HEALTH DATA

| ROUTE(S) OF ENTRYHUMAN EFFECTS AND SYMPTOMS OF OVE | |
|---|---|
| | : HDI vapors or mist at concentrations above the TLV or MGL can irritate (burning sensation) the mucous membranes in the respiratory |
| | oat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction.). Persons with a preexisting, concentrations below the TLV or MGL with similar symptoms as well as an asthma attack. Exposure well above the TLV or MGL may lead |
| to bronchitis, bronchial spasm and pulmonary edema | (fluid in lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g., fever, chills) has |
| 1 1 5 | to the eyes, nose and throat. Symptoms of irritation may include: redness, burning, and itching of the eyes, dryness of the throat and tightness re include: headache, nausea, narcosis, fatigue and loss of appetite. A concentration of 200 ppm BA can cause eye, nose, and throat irritation |
| | exposed to 200 ppm of xylene experienced eye, nose and throat irritation. Concentrations of 10,000 ppm of xylene can be immediately |
| dangerous to life and health. | |
| | : As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical sure to isocyanate at levels well below the TLV or MGL. These symptoms, which include: chest tightness, wheezing, cough, shortness of |
| | ayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individua |
| to isocyanates has also been reported to cause lung da | t, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure image, including decrease in lung function, which may be permanent. Sensitization may be either temporary or permanent. Chronic exposure |
| to organic solvents has been associated with various r loss of coordination. | neurotoxic effects including permanent brain and nervous system damage. Symptoms include: loss of memory, loss of intellectual ability and |
| | : Isocyanates react with skin protein and moisture and can cause irritation. Symptoms of skin irritation may be reddening, swelling, rash, |
| scaling or blistering. Some persons may develop skin | sensitization from skin contact. Cured material is difficult to remove. Repeated or prolonged skin contact with solvents can result in dry, |
| | ility to infection. In addition, skin irritation (i.e. redness, swelling), which may develop into dermatitis, may occur from skin contact. Solvent similar to those identified under acute inhalation symptoms. |
| | : Prolonged contact with the isocyanate can cause reddening, swelling, rash, scaling or blistering. In those who have developed a skin |
| , , , , , | of contact with very small amounts of liquid material or even as a result of vapor-only exposure. Chronic skin exposure to solvents may |
| cause effects similar to those identified under chronic | inhalation effects: Liquid, aerosols and vapors of this product (isocyanate and solvents) are irritating and can cause tearing, reddening and swelling |
| accompanied by a stinging sensation and/or a feeling | |
| | May result in corneal opacity (clouting of the eye surface). Prolonged vapor contact may cause conjunctivitis. |
| solvent resulting in chemical pneumonitis. | : Can result in irritation and possible corrosive action in the mouth, stomach tissue and digestive tract. Vomiting may cause aspiration of the |
| CHRONIC INGESTION | : None Found |
| CARCINOGENICITY NTP | W. P. J. |
| IARC | |
| OSHA | |
| MEDICAL CONDITIONS | |
| | : Asthma and other respiratory disorders (bronchitis, emphysema, hyperreactivity), skin allergies, eczema. |
| EXPOSURE LIMITS | : Not established for product as a whole. Refer to Section II for exposure limits of hazardous constituents. The guideline level of 0.5 mg/m |
| - TWA and 1.0 mg/m3 - STEL for the Homopolymer future data. | of HDI and 0.02 ppm ceiling for HDI monomer are internal guides based on limited data; they are provided as guides pending the review of |
| | SECTION 6 - EMERGENCY AND FIRST AID PROCEDURES |
| FIRST AID FOR EVES | : Flush with clean, lukewarm water (low pressure) for at least 15 minutes, while lifting eyelids. Refer individual to physician or |
| ophthalmologist for immediate follow-up. | |
| | : Remove contaminated clothing immediately. Wash affected areas thoroughly with soap and water. Wash contaminated clothing |
| thoroughly before reuse. For severe exposures, get un persists. | der safety shower after removing clothing, then get medical attention. For lesser exposures, seek medical attention if irritation develops or |
| • | : Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. |
| | mmediate or delayed up to several hours. Treatment is essentially symptomatic. Consult physician. |
| UNCONSCIOUS OR CONVULSING PERSON. Co | : DO NOT INDUCE VOMITING. Give 1 to 2 cups of milk or water to drink. DO NOT GIVE ANYTHING BY MOUTH TO AN |
| | : EYES: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation frequently. Workplace vapors could |
| | vision. SKIN: This product is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. INGESTION: Treat symptomatically as for contact dermatitis or thermal burn. INGESTION: |
| | ng vomiting is contraindicated because of the irritating nature of the product. INHALATION: This product is a known pulmonary sensitizer aving a dermal or pulmonary sensitization reaction to this material must be removed from any further exposure to any isocyanate. |
| | |
| SE | CTION 7 - EMPLOYEE PROTECTION RECOMMENDATIONS |
| REQUIRED WORK/ | |
| operations, protection must be afforded against expos | : Precautions must be taken so that persons handling this product do not breathe the vapors or have it contact the eyes or skin. In spray |
| | : Safety glasses, splash goggles or face shield. Contact lenses should not be worn. |
| SKIN PROTECTION REQUIREMENTS | : Permeation resistant gloves. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep |
| the area protected only by the cream to a minimum. RESPIRATOR REQUIREMENTS | : A respirator that is recommended or approved for use in isocyanate containing environments (air purifying or fresh air supplied) may be |
| | ental concentrations. Observe OSHA regulations for respirator use (29 CFR 1910.134). |
| NOTE ON ODOR WARNING PROPERTIES | : Pure isocyanate materials have odor thresholds that are higher than the TLV, PEL or MGL. Thus, if a vapor/particulate air-purifying |
| | of the filter can result in exposure over the allowable limit without the wearer being able to smell the isocyanate. However, when a s, the wearer of a vapor particulate respirator will be warned of filter breakthrough by the odor of solvents before being exposed to |
| | or thresholds, and 2) testing has demonstrated that solvents break through filters before isocyanates do. |
| SPRAY APPLICATION | : Good industrial hygiene practice dictates that when isocyanate based coatings are spray applied, some form of respiratory protection |
| should be worn. During the spray application of organ | nic solvent containing coatings systems, the use of a positive pressure supplied air respirator is mandatory when: - the airborne isocyanate |

SECTION 7 - EMPLOYEE PROTECTION RECOMMENDATIONS - Continued

concentrations are not known, or - the airborne HDI monomer concentrations exceed 0.05 ppm (10 times the TLV) or the polyisocyanate (polymeric, oligomeric) concentrations exceed 5 mg/m3 averaged over 8 hours or 10 mg/m3 averaged over 15 minutes (10 times the MGL) or - spraying is performed in a confined space or in an area with limited ventilation. A properly fitted airpurifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate-containing spray paint environments, will provide adequate protection when: - the airborne HDI monomer concentrations are known to be below 0.05 ppm (10 times the TLV), and - the polyisocyanate (polymeric, oligomeric) concentrations are known to be below 5 mg/m3 averaged over 8 hours or 10 mg/m3 averaged over 15 minutes (10 times the MGL).

NON-SPRAY OPERATIONS Even during non-spray operations such as mixing, batch making, brush or roller application, etc., depending on the conditions (for example, heating of material or application to a hot substrate), it is possible to be exposed to airborne isocyanate vapors. Therefore, when the coatings system contains solvents and will be applied in a non-spray manner, a positive pressure supplied air respirator must be worn when:

- the airborne concentrations are unknown; or
- the airborne HDI monomer concentrations exceed 0.05 ppm (10 times the TLV), or
- the airborne concentrations of the polyisocyanate (polymeric, oligomeric) exceed 5 mg/m3 averaged over 8 hours or 10 mg/m3 averaged over 15 minutes (10 times the MGL), or
- operations are performed in a confined space or in an area with limited ventilation. At least an air purifying (organic vapor) respirator is required when:
- the airborne concentrations of the HDI monomer exceed the TLV of 0.005 ppm but are below 0.05 ppm (10 times the TLV), or
- the airborne concentrations of the polyisocyanate (polymeric, oligomeric) exceed the MGL of 0.5 mg/m3 averaged over 8 hours, or 1.0 mg/m3 averaged over 15 minutes but are below 10 mg/m3 (10 times the MGL)

VENTILATION REQUIREMENTS..... Exhaust ventilation sufficient to keep the airborne concentrations of HDI and polyisocyanate below their respective TLV and MGL must be utilized. Exhaust air may need to be cleaned by scrubber or filters to reduce environmental contamination.

guidance concerning appropriate air sampling strategy to determine airborne concentrations.

MEDICAL SURVEILLANCE...... Medical supervision of all employees who handle or come in contact with HDI is recommended. This should include preemployment and periodic medical examinations with respiratory function tests (FEV, FVC as a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as being sensitized to isocyanates, no further exposure can be permitted. ADDITIONAL PROTECTIVE MEASURES: Safety showers and eyewash stations should be available. Educate and train employees in safe use of product. Follow all label

SECTION 8 - REACTIVITY DATA

.....: Stable under normal conditions. INCOMPATIBILITIES: Water, amines, strong bases, alcohols, metal compounds and surface active materials.

INSTABILITY CONDITIONS :: None known

SECTION 9 - SPILL AND LEAK PROCEDURES

...... Evacuate nonessential personnel. Remove all sources of ignition and ventilate the area. Notify appropriate authorities if necessary. Put on personal protective equipment (See Section VII). Dike or impound spilled material and control further spillage if feasible. Cover the spill with sawdust, vermiculite, Fuller's earth or other absorbent material. Pour decontamination solution over spill area and allow to react for at least 10 minutes. Collect material in open containers and add further amounts of decontamination solution. Remove containers to a safe place, cover loosely, and allow to stand for 24 to 48 hours. Wash down spill area with decontamination solutions. Decontamination solutions: nonionic surfactant Union Carbide's Tergitol TMN-10 (* 20%) and water (80%); concentrated ammonia (3-8%), detergent (2%) and water (90-95%).

method. Empty containers must be handled with care due to product residue and flammable solvent vapor. Decontaminate containers prior to disposal. DO NOT HEAT OR CUT EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH. (See Section IV and VIII).

SECTION 10 - SPECIAL PRECAUTIONS & STORAGE DATA

STORAGE TEMPERATURE(MIN/MAX): -30 F (-34 C)/122 F (50 C)

SHELF LIFE...... 6 months at 77 F (25 C) after receipt of material by customer.

SPECIAL SENSITIVITY...... If container is exposed to high heat, it can be pressurized and possibly rupture explosively. HDI reacts slowly with water to form C02 gas. This gas can cause sealed containers to expand and possibly rupture explosively.

HANDLING/STORAGE PRECAUTIONS Keep away from heat, sparks and open flame. Ground containers during storage and transfer operations. Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. At maximum storage temperatures noted, material may slowly polymerize without hazard. Ideal storage temperature range for ease of handling is 50-81 F (10-27 C). Avoid contact with skin and eyes. Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard.

SECTION 11 - SHIPPING INFORMATION

TECHNICAL SHIPPING NAME Paint, contains xylene FREIGHT CLASS BULK Isocyanate PACKAGING GROUP: III FREIGHT CLASS PACKAGE..... Paint HAZARD LABEL(s)....: Flammable Liquid

PRODUCT LABEL MAGNATHANE 79HS CATALYST

DOT (HM-181) (DOMESTIC SURFACE)

PROPER SHIPPING NAME Paint HAZARD CLASS OR DIVISION 3 UN/NA NUMBER UN1263
PACKAGING GROUP PG III **DOT PRODUCT RQ lbs (kgs)** 8,000 lbs (3628.8 kgs)

HAZARD LABEL(s)..... Flammable Liquid HAZARD PLACARD(s)..... Flammable

IMO / IMDG CODE (OCEAN)

HAZARD CLASS DIVISION NUMBER..... 3.3

HAZARD PLACARD(s)....: Flammable Liquid ICAO / IATA (AIR) PROPER SHIPPING NAME Paint HAZARD CLASS DIVISION NUMBER..... 3

UN NUMBER :: UN1263 SUBSIDIARY RISK None PACKING GROUP: III HAZARD LABEL(s)....: Flammable Liquid PASSENGER AIR - MAX. QTY. 60L PASSENGER INSTRUCTION NUMBER...... 309 CARGO AIR - MAX. QTY. 220L

CARGO AIR INSTRUCTION NUMBER 310

SECTION 12 - ANIMAL TOXICITY DATA

| TOXICITY DATA FOR | : HDI homopolymer materials except where indicated. |
|---|--|
| ACUTE TOXICITY | |
| | |
| ORAL LD50 | : Estimated to be greater than 10,000 mg/kg (Rats). (Based on the results of actual tests conducted using specific HDI-homopolymer |
| products.) | |
| INHALATION LC50 | : Lower respiratory (pulmonary) irritant. LC50 values ranging from 137-1150 mg/m3 were obtained in rats exposed to aerosols. |
| EYE EFFECTS | : Severe irritant capable of inducing corneal injury (Rabbit); maximum primary eye irritation score: 54.6/110 for a 24 hr. exposure. |
| SKIN EFFECTS | : Moderate irritant; primary dermal irritation score: 3.4/8.0 (Rabbit). |
| SENSITIZATION | : Pulmonary and dermal sensitizer in animals and humans. Evidence exists that cross-sensitization between HDI and other isocyanates, |
| particularly hydrogenated MDI and TDI, can occur. O | OTHER ACUTE EFFECTS: AMES TEST: Negative for 100% solids material. |
| SUBCHRONIC TOXICITY | : Rats exposed to an HDI homopolymer (biuret type, specifically, the solvent-free version of this product), at 3.7, 17.5 and 76.6 mg/m3 fo |
| | |

Observable Effect Level (NOEL) was 3.7 mg/m3. Rats exposed for three months (6 hrs/day, 5 day/wk) to a HDI homopolymer (biuret type, specifically, the solvent-free product version of this product), at aerosol concentrations of 0.4, 3.4 and 21 mg/m3 exhibited lung weight increases at the highest dose. Histopathologic diagnosis of the test animals revealed swelling and thickening in the lower respiratory tract as well as thickening of the bronchio-alveolar areas of the lung and thickening of the septum in the 21 mg/m3 animals. There were no effects noted in the upper and central respiratory tract. The No Observable Effect Level (NOEL) in this study is considered to be 3.4 mg/m3.

| TOXICITY DATA FOR | : Xylene |
|-------------------|--------------------------------------|
| ACUTE TOXICITY | • |
| ORAL LD50 | : 4,300 mg/kg (Rat) |
| DERMAL LD50 | : Greater than 1,700 mg/kg (Rabbit) |
| INHALATION LC50 | : 5,000 ppm (Rat, 4H exp) |
| EYE EFFECTS | : Mild to severe irritation (Rabbit) |
| SKIN EFFECTS | : Moderate irritation (Rabbit) |

SECTION 13 - FEDERAL REGULATORY INFORMATION

| OSHA STATUS | : This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200. |
|--|--|
| TSCA STATUS | : On TSCA Inventory |
| CERCLA REPORTABLE QUANTITY | : Xylene : 1000 lbs |
| SARA TITLE III: | |
| SECTION 302 EXTREMELY | |
| HAZARDOUS SUBSTANCES | : None |
| SECTION 311/312 | |
| HAZARD CATEGORIES | : Immediate Health Hazard; Delayed Health Hazard; Fire Hazard; Reactive Hazard |
| SECTION 313 | |
| TOXIC CHEMICALS | : Xylene (CAS# 1330-20-7) 25.0 % |
| RCRA STATUS | : When discarded in its purchased form, this product meets the criteria of ignitability, and should be managed as a hazardous waste (EPA |
| Hazardous Waste Number D001). (40 CFR 261.20-24) | |
| RCRA STATUS | : When discarded in its purchased form, this product meets the criteria of ignitability, and should be managed as a hazardous waste (EPA |

SECTION 14 - OTHER REGULATORY INFORMATION

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

| COMPONENT NAME /CAS NUMBER | CONCENTRATION | STATE CODE | |
|---|---------------|--|--|
| Homopolymer of HDI 28182-81-2 | 75 % | PA3, NJ4 | |
| Xylene 1330-20-7 | 25 % | PA1, MA, NJ2 | |
| FL = Florida Substance List IL = Illinois Toxic Substances List MA = Massachusetts Hazardous Substance List NJ1 = New Jersey Hazardous Substance List NJ2 = New Jersey Environmental Hazardous Substance List NJ4 = New Jersey Other - included in 5 predominant ingredients > 1% | | NJTSRN = New Jersey Trade Secret Registry Number PAX = Pennsylvania Hazardous Substance List PA1 - Pennsylvania Hazardous Substance List PA3 = Pennsylvania Non-hazardous present at 3% or greater. RI = Rhode Island List of Designated Substances CN2 = Canada WHMIS Ingredient Disclosure List over 0.1%. | |

CALIFORNIA PROPOSITION 65

To the best of our knowledge, this product contains no levels of listed substances, which the state of California has found to cause cancer, birth defects or other reproductive effects.

| NFPA 704M RATINGS: | Health | Flammability | Reactivity | Other |
|--------------------|---------------------------|------------------------|--------------------|-----------------|
| | 3 | 3 | 1 | |
| | 0 = Insignifi | icant l = Slight 2 = 1 | Moderate $3 = Hig$ | h 	 4 = Extreme |
| HMIS RATINGS: | Health | Flammability | Reactivity | |
| | 3* | 3 | 1 | |
| | 0 = Minima | l = Slight 2 = Moc | derate 3 = Serious | 4 = Severe |
| | * = Chronic Health Hazard | | | |

MAGNET's method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by MAGNET as a customer service. THE DATA IN THIS MSDS HAS BEEN COMPILED FROM PUBLICLY AVAILABLE SOURCES. THIS DATA RELATES ONLY TO THE DESIGNATED PRODUCT AND NOT TO THE USE OF SAID PRODUCT IN COMBINATION WITH OTHER MATERIALS, BECAUSE CONDITIONS AND CIRCUMSTANCES OF USE OF THE PRODUCT ARE BEYOND OUR CONTROL AND ANY SUMMARY OF DATA SUCH AS IS REPRESENTED BY THIS MSDS IS INHERENTLY INCOMPLETE, MAGNET PAINT/McGREVOR COATINGS MAKES NO WARRANTY ABOUT THE ACCURACY OF THE DATA HEREIN AND ASSUMES NO LIABILITY FOR THE USE OF SUCH DATA. RESPONSIBILITY FOR PROPER PRECAUTIONS AND SAFE USE OF THIS PRODUCT LIES WITH THE USER.