

MATERIAL SAFETY DATA SHEET

ALIPHATIC ISOCYANATE SURFACE BINDER

HMIS CODES: H F R P
3 1 1

PRODUCT NAME: ALIPHATIC ISOCYANATE SURFACE BINDER
PRODUCT CODE: H3168

=====SECTION I – MANUFACTURER IDENTIFICATION=====

MANUFACTURER'S NAME: Marchem Pacific
ADDRESS : 212 W. Taft Avenue
Orange, CA 92865

EMERGENCY PHONE : (800) 424-9300
INFORMATION PHONE : (714) 921-2300
DATE PRINTED : 05/22/06
NAME OF PREPARER: Safety Director

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

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Rg @TEMP	WEIGHT PERCENT
*dicyclohrxylmethane-4,4'-DIISOCYANATE ACGIH TLV: 0.005 PPM TWA: OSHA PNI: 0.01 PPM CEILING	5124-30-1		30.9

*Indicates Toxic chemicals(s) subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372.

Information not available.

Information not available.

N/A – NOT APPLICABLE NOINFO = NO INFORMATION AVAILABLE N.E. – NOT ESTABLISHED

=====SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS=====

BOILING RANGE 205C, 401F
VAPOR DENSITY: VAPOR DENSITY (AIR=1)...HEAVIER THAN AIR
SOLUBILITY IN WATER: SOLUBILITY IN WATER: REACTS
APPEARANCE AND ODOR: Clear viscous liquid.
Odorless
SPECIFIC GRAVITY (H20=1): 1.03
EVAPORATION RATE: N/A

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

FLASH POINT: 335 F
FLAMMABLE LIMITS IN AIR BY VOLUME – LOWER: N/A **UPPER:** n/a
METHOD USED: PMCC

EXTINGUISHING MEDIA: EXTINGUISHING MEDIA: DRY CHEMICAL EXTINGUISHERS SUCH AS MONOAMMONIUM PHOSPHATE, POTASSIUM SULFATE, POTASSIUM CHLORIDE, ADDITIONALLY, CARBON DIOXIDE, HIGH EXPANSION (PROTEINIC) CHEMICAL FOAM, WATER SPRAY FOR LARGE FIRES.

SPECIAL FIREFIGHTING PROCEDURES
SPECIAL FIREFIGHTING PROCEDURES: IF WATER IS USED, USE LARGE AMOUNTS AS THE REACTION BETWEEN HOT ISOCIATES AND WATER CAN BE VIGOROUS, USE NIOSH-APPROVED SELF-CONTAINED BREATH IN APPARATUS AD BODY COVERING PROTECTIVE CLOTHING.

UNUSUAL FIRE AND EXPLOSION HAZARDS
UNUSUAL FIRE AND EXPLOSION HAZARDS: WATER CONTAMINATION WILL PRODUCE CARBON DIOXIDE. DO NOT RE-SEAL CONTAMINATED CONTAINERS AS PRESSURE BUILDUP MAY RUPTURE.

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=====SECTION V – REACTIVITY DATA=====

STABILITY: STABILITY: STABLE – UNDER RECOMMENDED STORAGE CONDITIONS.

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CONDITIONS TO AVOID

Special sensitivity (Heat, Light, Moisture): This product is hygroscopic. Containers should be tightly sealed to prevent moisture contamination. Do not expose to high temperatures for any length of time.

INCOMPATIBILITY (MATERIALS TO AVOID)

INCOMPATIBILITY (MATERIAL TO AVOID): WATER, ACID, BASES, METAL COMPOUNDS AND SURFACE ACTIVE MATERIALS. AVOID WATER AS IT REACTS TO FORM HEAT, CO2 AND INSOLUBLE UREA. THE COMBINED EFFECT OF THE CO2 AND HEAT CAN PRODUCE ENOUGH PRESSURE TO RUPTURE A CLOSED CONTAINER. SOME REACTIONS ARE VIOLENT IN THE PRESENCE OF THE ABOVE MENTIONED MATERIALS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: ISOCYANATE VAPOR AND MIST, CARBON MONOXIDE, NITROGEN OXIDES AND TRACES OF HYDROGEN CYANIDE.

HAZARDOUS POLYMERIZATION: HAZARDOUS POLYMERIZATION: MAY OCCUR WITH INCOMPATIBLE REACTANTS, ESPECIALLY STRONG BASES, WATER OR TEMPERATURES OVER 347 F (175 C.). TEMPERATURES OVER 120 F (49 C.) ACCELERATE THE REACTION WITH WATER.

=====SECTION VI – HEALTH HAZARD DATA=====

ANIMAL TOXICITY:

- ORAL, LD50 (INGESTION) :** 1065 mg/m3 (Rat)
- DERMAL, LD50 (SKIN CONTACT),.....:** 10,000 mg/kg (Rabbits)
- INHALATION, LC50 (4HR),.....:** 434 mg/m3 (Rate)
- AQUATIC, LC50 (24HR),.....:** N/A
- EYES,.....:** Mild Irritant. Reversible (Rabbit)
- SKIN,.....:** Slight irritation (Rabbits) ORCD guidelines & sensitizer in Guina pigs

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

INHALATION: MAY CAUSE RESPIRATORY SENSITIZATION IN SUSCEPTIBLE INDIVIDUALS. AT ROOM TEMPERATURE, VAPORS ARE MINIMAL DUE TO LOW VAPOR PRESSURE. IF HEATED OR SPRAYED AS AN AEROSOL, EXCESSIVE CONCENTRATIONS ARE ATTAINABLE THAT COULD BE HAZARDOUS ON SINGLE EXPOSURE. EXCESSIVE EXPOSURE MAY CAUSE IRRITATION OF THE EYES, UPPER RESPIRATORY TRACT AND LUNGS. EFFECTS MAY BE DELAYED, DECREASED VENTILATION CAPACITY HAS BEEN ASSOCIATED WITH EXPOSURE TO SIMILAR ISOCYANATES; IT IS POSSIBLE THAT EXPOSURE TO TDI-MDI MAY CAUSE IMPAIRMENT OF LUNG FUNCTION.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

SKIN CONTACT: REMOVE PRODUCT AND IMMEDIATELY FLUSH AFFECTED AREA WITH WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. WASH BEFORE REUSE, LAUNDRY CONTAMINATED CLOTHING PRIOR TO REUSE. CONTAMINATED LEATHER WEAR SHOULD BE DISCARDED. CALL PHYSICIAN. VICTIMS OF A MAJOR SKIN AREA CONTACT SHOULD REMAIN UNDER MEDICAL OBSERVATION FOR AT LEAST 24 HOURS DUE TO POSSIBLE DELAYED EFFECTS.

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EYE CONTACT: FOLLOWING EYE CONTACT, FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MAY CAUSE ALLERGIC SKIN REACTION IN SUSCEPTIBLE INDIVIDUALS. PROLONGED OR REPEATED CONTACT MIGHT CAUSE SKIN IRRITATION. MAY STAIN THE SKIN.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

INGESTION: THIS IS NOT CONSIDERED A COMMON OCCUPATIONAL ROUTE OF EXPOSURE, AND SINGLE DOSE TOXICITY IS LOW. DO NOT INDUCE VOMITING, CONSULT PHYSICIAN IMMEDIATELY.

HEALTH HAZARDS (ACUTE AND CHRONIC)

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INHALATION: MAY CAUSE RESPIRATORY SENSITIZATION IN SUSCEPTIBLE INDIVIDUALS. AT ROOM TEMPERATURE, VAPORS ARE MINIMAL DUE TO LOW VAPOR PRESSURE. IF HEATED OR SPRAYED AS AN AEROSOL, EXCESSIVE CONCENTRATIONS ARE ATTAINABLE THAT COULD BE HAZARDOUS ON SINGLE EXPOSURE. EXCESSIVE EXPOSURE MAY CAUSE IRRITATION OF THE EYES, UPPER RESPIRATORY TRACT AND LUNGS. EFFECTS MAY BE DELAYED. DECREASED VENTILATION CAPACITY HAS BEEN ASSOCIATED WITH EXPOSURE TO SIMILAR ISOCYANATES; IT IS POSSIBLE THAT EXPOSURE TO TDI-MDI MAY CAUSE IMPAIRMENT OF LUNG FUNCTION.

CARCINOGEN CITY: NTP CARCINOGEN: NO IARC MONOGRAPHS: NO OSHA REGULATED: NO
Information not available.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

PRE EXISTING MEDICAL CONDITIONS THAT MAY BE AGGRAVATED BY EXPOSURE INCLUDE, BUT NOT LIMITED TO, CHRONIC RESPIRATORY AND SKIN DISEASE AND CENTRAL NERVOUS SYSTEM DISORDERS.

EMERGENCY AND FIRST AID PROCEDURES

EMERGENCY/FIRST AID: NOTE TO PHYSICIAN – NO SPECIFIC ANTIDOTE. SUPPORTIVE CARE. TREATMENT BASED ON JUDGMENT OF PHYSICIAN IN RESPONSE TO REACTIONS OF THE PATIENT. THE MANIFESTATIONS OF RESPIRATORY SYMPTOMS INCLUDE PULMONARY EDEMA, RESULTING FROM ACUTE EXPOSURE. MAY BE DELAYED. MAY CAUSE RESPIRATORY SENSITIZATION.

EMERGENCY/FIRST AID: EYE CONTACT – FLUSH WITH CLEAN, LUKE WARM WATER AT LOW PRESSURE FOR AT LEAST 15 MINUTES, OCCASIONALLY LIFTING EYELIDS. CONSULT A PHYSICIAN IMMEDIATELY.

EMERGENCY/FIRST AID: INGESTION – NO ADVERSE EFFECTS ANTICIPATED BY THIS ROUTE OF EXPOSURE INCIDENTAL TO PROPER INDUSTRIAL HANDLING.

EMERGENCY/FIRST AID: SKIN CONTACT – REMOVE CONTAMINATED CLOTHING. WASH EXPOSED AREA WITH WARM SOAPY WATER THOROUGHLY. CONTAMINATED CLOTHING SHOULD BE PROPERLY LAUNDERED BEFORE REUSING.

EMERGENCY/FIRST AID: INHALATION – REMOVE VICTIM FROM AREA OF EXPOSURE TO SAFE AREA. IF NOT BREATHING, GIVE MOUTH- TO- MOUTH RESUSCITATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CONSULT A PHYSICIAN IMMEDIATELY.

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

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

RELEASE OR SPILL: CLEAN UP – DECONTAMINATE AREA USING WATER/AMMONIA SOLUTION WITH 1-2% ADDED DETERGENT, LETTING IT STAND OVER AFFECTED AREA FOR AT LEAST 10 MINUTES. COVER MOP, BROOM, ETC. USED FOR THIS WITH PLASTIC AND DISPOSE OF PROPERLY.

RELEASE OR SPILL: MINOR SPILLS – CONTAIN THE SPILLED MATERIAL AND THEN COVER WITH A LOOSE, ABSORBENT MATERIAL SUCH AS OILDRIY, VERMICULITE, OR SAWDUST. SHOVEL WASTE MATERIAL INTO PROPER WASTE CONTAINERS. DO NOT MAKE PRESSURE TIGHT. TRANSPORT TO A WELL-VENTILATED AREA AND TREAT WITH A NEUTRALIZING SOLUTION CONSISTING OF A MIXTURE OF WATER AND 30% CONCENTRATED

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AMMONIUM HYDROXIDE OR 5-10% SODIUM CARBONATE. ADD ABOUT 10 PARTS OF NEUTRALIZER PER PART OF ISOCYANATE WITH MIXING. ALLOW TO STAND 48 HOURS, LETTING EVOLVED CO2 ESCAPE.

RELEASE OR SPILL: MAJOR SPILLS – CALL MANUFACTURER IMMEDIATELY! IF IT IS A TRANSPORTATION SPILL, NOTIFY CHEMTREC (800) 424-9300. EVACUATE AND VENTILATE SPILL AREA. DIKE SPILL TO PREVENT ENTRY INTO THE ENVIRONMENT. WEAR FULL PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION DURING CLEAN UP.

RELEASE OR SPILL: MAJOR SPILLS – IF TEMPORARY CONTROL OF ISOCYANATE VAPOR IS REQUIRED, A BLANKET OF PROTEIN FOAM MAY BE PLACED OVER THE SPILL. LARGE QUANTITIES MAY BE PUMPED INTO CLOSED *BUT NOT SEALED* CONTAINERS FOR DISPOSAL.

WASTE DISPOSAL METHOD

WASTE DISPOSAL: WASTE MATERIAL MAY BE INCINERATED OR DISPOSED OF UNDER LOCAL, STATE AND FEDERAL REGULATIONS CONTROLLING ENVIRONMENTAL PROTECTION.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

HANDLING AND STORAGE: STORAGE TEMPERATURE (MIN/MAX) 65 F. TO 85 F.

HANDLING AND STORAGE: AVERAGE SHELF LIFE – 6 MONTHS FROM DATE OF MFG.

HANDLING AND STORAGE: SPECIAL SENSITIVITY (HEAT-LIGHT-MOISTURE) – THIS PRODUCT IS REACTIVE WITH WATER. CONTAINERS SHOULD BE TIGHTLY SEALED TO PREVENT MOISTURE CONTAMINATION. A NITROGEN BLANKET SHOULD BE USED FOR BULK STORAGE. STORE AT A TEMPERATURE OF 65 F. TO 85 F. PROTECT FROM FREEZING.

HANDLING AND STORAGE: CONTAMINATION – IF CONTAMINATION OF THE MDI IS SUSPECTED, DO NOT RE-SEAL CONTAINER BECAUSE OF POSSIBLE RUPTURE DUE TO PRESSURE BUILDUP. ALWAYS SLOWLY VENT CONTAINER WHEN OPENING TO RELIEVE ANY PRESSURE BUILDUP.

OTHER PRECAUTIONS

HANDLING AND STORAGE: PRECAUTIONS – IF CONTAMINATION OF THE TDI-MDI IS SUSPECTED. DO NOT RE-SEAL CONTAINER BECAUSE OF POSSIBLE RUPTURE DUE TO PRESSURE BUILDUP. ALWAYS SLOWLY VENT CONTAINER WHEN OPENING TO RELIEVE ANY PRESSURE BUILDUP.

=====SECTION VIII – CONTROL MEASURES=====

RESPIRATORY PROTECTION

RESPIRATORY PROTECTION: THIS PRODUCT HAS DEMONSTRATED NO OBSERVABLE EFFECT AT ROOM TEMPERATURE, HOWEVER IT IS HIGHLY RECOMMENDED AN AIR PURIFYING RESPIRATOR WITH ORGANIC FILTER CARTRIDGES BE WORN. IN ADDITION, IN ANY SPRAY APPLICATION, A SUPPLIED AIR SOURCE MUST BE PROVIDED.

VENTILATION

VENTILATION: NATURAL OR MECHANIC – LOCAL EXHAUST WILL KEEP THE TLV BELOW MINIMUM IN MOST CASES. SPILLS OR OTHER EMERGENCIES MAY REQUIRE MORE FORCEFUL VENTILATION MEANS.

PROTECTIVE GLOVES

SKIN PROTECTION: CHEMICAL RESISTANT GLOVES SUCH AS NATURAL RUBBER, OR POLYVINYL ALCOHOL. COVER AS MUCH EXPOSED SKIN AS POSSIBLE WITH APPROPRIATE CLOTHING. IF SKIN CREAMS ARE USED, KEEP THE AREA COVERED BY THE CREAM TO A MINIMUM.

EYE PROTECTION

EYE PROTECTION: LIQUID CHEMICAL GOGGLES OR FULL FACE SHIELD. NO CONTACT LENSES SHOULD BE WORN.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: SAFETY SHOWERS AND EYE WASH STATIONS SHOULD BE PROVIDED IN ALL WORK AREAS. ALL EMPLOYEES SHOULD BE PROPERLY TRAINED.

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WORK/HYGIENIC PRACTICES

WORK/HYGIENIC PRACTICES: SAFETY SHOWERS AND EYE WASH STATIONS SHOULD BE PROVIDED IN ALL WORK AREAS. ALL EMPLOYEES SHOULD BE PROPERLY TRAINED.

=====SECTION IX – REGULATORY INFORMATION=====

PROPER SHIPPING NAME: Other Regulated Substances, Liquid, N.O.S. (Aviation Regulated Liquid, N.O.S.)

HAZARD CLASS: 9

UN NUMBER: NA3082 Packing Group III

FREIGHT CLASS (BULK): Isocyanate, Class 55

FREIGHT CLASS (PACKAGE): CHEMICALS, MDI (ISOCYANATE), NMFC 60000

PRODUCT LABEL: ‘A’ COMPONENT - ISOCYANATE

PLACARDS REQUIRED: Class 9

TSCA: All ingredients are in the TSCA Inventory of Chemical Substances and/or are otherwise in compliance with TSCA.

=====SECTION X – COMMENTS=====

The information contained in the Material Safety Data Sheet is based on the neat or concentrated product as shipped.

=====SECTION XI – DISCLAIMER=====

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This product safety information is provided to assist our customers in compliance with Health/Safety/Environmental regulations. The information contained herein is based on data available to us and is believed to be accurate. However, no warranty of Merchantability, fitness for any use, or any other warranty is expressed or to be implied, regarding the accuracy of this data, the results to be obtained from the use thereof, or the hazards connected with the use of this product. Since the use of this product is within the exclusive control of the user, it is the users obligation to determine the safe use of this product. Such conditions should comp0ly with all the federal regulations concerning this product. The “SELLER” assumes no liability for any injury or damage, direct or consequential, resulting from the use of this product unless such injury or damage is attributable to negligence.