

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : 2K WATER BASED URETHANE PART B
 IDENTIFICATION NUMBER: WBU PART B DATE PRINTED: 05/05/11
 PRODUCT USE/CLASS :

SUPPLIER: Marine Industrial Paint Co., Inc. 4590 60th Ave. St. Petersburg, FL 33714	MANUFACTURER: Marine Industrial Paint Co., Inc. 4590 60th Ave. St. Petersburg, FL 33714
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EMERGENCY TELEPHONE: 727-527-3382 8 AM - 4 PM	EMERGENCY TELEPHONE: 800-255-3924 24 HOURS
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PREPARER: Steven C. Halliday, PHONE: 727-527-3382, PREPARE DATE: 05/05/11

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % LESS THAN
01	Homopolymer of Hexamethylene Diisocyanate	28128-81-2	<100.0 %
02	Hexamethylene - 1,6 Diisocyanate	822-06-0	< 0.25 %

ITEM	EXPOSURE LIMITS						SKIN
	ACGIH		OSHA		COMPANY		
TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	TLV-TWA			
01	N.E.	N.E.	N.E.	N.E.	0.5 mg/m3	Yes	
02	.005 ppm	N.E.	N.E.	N.E.	0.02 ppm	Yes	

(See Section 16 for abbreviation legend)

SECTION 3 - HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***: Harmful if inhaled. Causes respiratory tract irritation, May cause allergic respiratory reaction. Respiratory sensitizer. Lung damage and respiratory sensitization may be permanent. Causes skin irritation. May cause allergic skin reaction. Skin sensitizer. Causes eye irritation. May cause lung damage. Toxic gases may be given off during burning or thermal decomposition. Closed containers may be forcibly ruptured under extreme heat or when contents have been contaminated with water.

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EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor may cause irritation with symptoms of burning and tearing. Prolonged vapor contact may cause conjunctivitis.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Causes irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling and rash. Cured material is difficult to remove. Prolonged contact may cause skin sensitization.

EFFECTS OF OVEREXPOSURE - INHALATION: Diisocyanate or polyisocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) with symptoms of runny nose, sore throat, coughing, chest discomfort, shortness of breath, reduced lung function, and breathing difficulty). Persons with a preexisting, nonspecific, bronchial hyperactivity can respond to levels below the exposure limits or guidelines with similar symptoms as well as asthma-like symptoms. Exposure well above the exposure limits or guidelines may lead to bronchitis, bronchial spasm, and edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (fever, chills) has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

EFFECTS OF OVEREXPOSURE - INGESTION: May cause abdominal pain, nausea, vomiting and diarrhea.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: As a result of previous, repeated exposures or a large dose, certain individuals may develop sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to Diisocyanate at levels well below the exposure limits or guidelines. These symptoms can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening, Similar to many asthmatic responses, there are reports that once sensitized, an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases, for several years. Sensitization can be permanent. Chronic overexposure to diisocyanates has also reported to cause (lung damage including fibrosis, decrease in lung function) that may be permanent.

CARCINOGENICITY - Not listed under IARC, NTP, and/or OSHA

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT, EYE CONTACT, INHALATION.

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SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: In case of contact, flush eyes with plenty of lukewarm water for at least 15 minutes.. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Get medical attention of irritation develops.

FIRST AID - SKIN CONTACT: Remove contaminated clothing and shoes. Wash with soap and water. Wash contaminated clothing before reuse. For severe exposure immediately get under safety shower and begin rinsing. Get medical attention if irritation develops and persists.

FIRST AID - INHALATION: If respiratory symptoms or other symptoms of exposure develop, move victim away from source of exposure and get into fresh air. Get medical attention immediately. Administer oxygen or artificial respiration as needed. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Extreme asthmatic reactions can be life threatening.

FIRST AID - INGESTION: Get medical attention immediately. This material is a potential aspiration hazard. DO NOT INDUCE VOMITING. If swallowed seek emergency medical attention. If victim is drowsy or unconscious, place on left side with head down. If possible, do not leave the victim unattended.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: 365 F
(TAGLIABUE CLOSED CUP)

LOWER EXPLOSIVE LIMIT: N.E.
UPPER EXPLOSIVE LIMIT: N.E.

AUTOIGNITION TEMPERATURE: 445 C (833 F)

EXTINGUISHING MEDIA: Dry Chemical, CO2 Foam, Water fog, Alcohol foam.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed container may forcibly rupture under extreme heat or when contents are contaminated with water. (CO2 formed). Use cold water to cool fire-exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied from a safe distance, since reactions between water and hot diisocyanate can be vigorous.

SPECIAL FIREFIGHTING PROCEDURES: Firefighters should wear NFPA compliant structural firefighting equipment, including self contained breathing apparatus and NFPA compliant helmet, hood, boots, and gloves. Avoid contact with product. Decontaminate equipment and clothing prior to reuse. Exposure to heated Diisocyanate can be extremely dangerous.

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SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Evacuate all non-emergency personnel. Isolate the area and prevent access. Remove ignition sources. Control the source of the leak, Cover spill area with suitable absorbent material (kitty litter, oil dry, etc.) Saturate absorbent material with neutralization solution and mix. A good neutralization solution is 90% water, 3 to 8% concentrated ammonia and 2% liquid detergent. Wait 15 minutes. Collect material in open head metal containers. Repeat Applications until the surface is decontaminated. Apply lid loosely and Allow containers to vent 72 hours to let carbon dioxide escape.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Wash thoroughly after handling. Use good personal hygiene practice.

STORAGE: Use and store this material in cool, dry, well ventilated areas away from heat and all sources of ignition. Keep containers closed when not in use. Store only in approved containers. Protect containers against physical damage.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Facilities storing or utilizing this product should be equipped with an eyewash facility and a safety shower.

RESPIRATORY PROTECTION: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying systems is limited. use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposures levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respirator that is recommended or approved for use in isocyanate-containing environments (air purifying or fresh air supplied) may be necessary for spray applications or other situations such as high temperature use which may produce inhalation exposures. A supplied air respirator (either positive pressure or fresh air supplied) is recommended. Before an air purifying respirator, air monitoring must be performed to measure airborne concentrations of HDI monomer and HDI polyisocyanate. Observe OSHA regulations for respirator use. (29 CFR 1910.134)

SPRAY APPLICATION: Good industrial hygiene practice dictates that when isocyanate-based coatings are spray applied, some form of respiratory protection should be worn.

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During the spray application the use of a supplied air (either continuous flow or positive pressure type) is mandatory when one or more of the following conditions exist : The airborne isocyanate concentrations are not known, or the airborne isocyanate monomer concentrations exceed 0.05 ppm averaged over eight (8) hours (ten times the 8 houe TWA exposure limit); or the airborne polyisocyanate (polymeric oligomeric) concentrations exceed 5 mg/m³ averaged over 8 hours, or 10 mg/m³ averaged over 15 minutes (ten times the 8 hour TWA or the 15 minute STEL exposure limits); or operations are performed in a confined space. (see OSHA Confines Space Standard, 29CFR 1910.146) properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate-containing spray paint environments and used in accordance with all recommendations made by the manufacturer, can be used when ALL of the following conditions are met: The airborne isocyanate monomer concentrations are known to be below 0.05 ppm averaged over eight (8) hours (ten times the 8 houe TWA exposure limit); or the airborne polyisocyanate (polymeric oligomeric) concentrations exceed 5 mg/m³ averaged over 8 hours, or 10 mg/m³ averaged over 15 minutes, and a NIOSH certified end of service indicator or a change schedule based on objective information or data is used to ensure cartridges are replaced at the end of their service life. In addition prefilters should be changed whenever breathing resistance increases due to particulate buildup.

NONSPRAY APPLICATIONS: During nonspray applications such as brush and roll especially at elevated temperatures, it is possible to be exposed to airborne isocyanate vapors. Therefore, when the coating system will be applied in a non spray manner, a supplied air (either positive pressure or continuous flow type) respirator is mandatory when ONE OR MORE of the following conditions exist: the airborne isocyanate concentrations are not known, or the airborne isocyanate monomer concentrations exceed 0.05 ppm averaged over eight (8) hours (ten times the 8 houe TWA exposure limit); or the airborne polyisocyanate (polymeric oligomeric) concentrations exceed 5 mg/m³ averaged over 8 hours, or 10 mg/m³ averaged over 15 minutes (ten times the 8 hour TWA or the 15 minute STEL exposure limits); or operations are performed in a confined space. (see OSHA Confines Space Standard, 29CFR 1910.146) A properly fitted air purifying (combination organic vapor and particulate) respirator may be used ia all the conditions listed under spray application are met.

SKIN PROTECTION: Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

EYE PROTECTION: Wear safety glasses with side shields (or goggles) and a face shield.

OTHER PROTECTIVE EQUIPMENT: No Information.

HYGIENIC PRACTICES: Wash hands before eating. Remove contaminated clothing and wash before reuse. Avoid prolonged or repeated contact with skin. Avoid contact with eyes, skin and clothing. Ground and bond containers when transferring material.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: N.A.	VAPOR DENSITY	: Is heavier than air
ODOR	: Slight	ODOR THRESHOLD	:
APPEARANCE	: Lt yellow liquid	EVAPORATION RATE:	N,A.
SOLUBILITY IN H2O	: Insoluble. Reacts with water to form CO2		
FREEZE POINT	: N.A.	SPECIFIC GRAVITY:	1.15
VAPOR PRESSURE	: <.001 mm Hg	pH @ 100.0 %	: N.A.
PHYSICAL STATE	: Liquid	VISCOSITY	:

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

HAZARDOUS REACTIONS; Contact with moisture, other materials that react with Isocyanates, or temperatures above 350 F may cause polymerization.

MATERIALS TO AVOID: Water, Amines, Strong bases, Alcohols, copper alloys.

HAZARDOUS DECOMPOSITION PRODUCTS: By fire and high heat: Carbon monoxide Carbon dioxide, nitrogen oxides, dense black smoke, hydrogen cyanide, isocyanate, isocyanic acid.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No Information.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of product in accordance with local, county, state, and federal regulations. Incineration is the preferred method. Empty containers retain product residue, observe all precautions for product.

SECTION 14 - TRANSPORTATION INFORMATION

Land Transport (DOT)
Proper shipping name: Other regulated substances, liquid, NOS'
(contains Hexamethylene 1,6- Diisocyanate)

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Hazard Class or division: 9
 UN/NA number: NA3082
 Packing Group: III
 Hazard Label: Class 9
 RSPA/DOT Regulated component: Hexamethylene Diisocyanate.
 Reportable Quantity: 40000 pounds
 Sea Transport (IMDG): Not regulated
 Air Transport (ICAO/IATA): Not regulated

Additional transportation information : When in individual containers of less than the product RQ, this material ships as non-regulated.

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazcon standard rating: Hazardous

US. Toxic Substance Control Act: Listed in TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302) components: None

SARA section 311/312 Hazard Categories.
 Acute Health Hazard, Chronic Health Hazard, Reactivity Hazard.

US EPA Emergency Planning and Community Right-to-know (EPCRA) SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355 appendix A) components: None

US EPA Emergency Planning and Community Right-to-know (EPCRA) SARA Title III Toxic Chemicals (40 CFR 372.65) Supplier notification required. Components: None

US EPA Resource Conservation and Recovery Act (RCRA) Composite list of Hazardous wastes and Appendix VIII Hazardous Constituents (40 CFR 261): If discarded in its purchased form, this product would not be hazardous Waste either by listing or characteristic.

State Right-to-Know

Massachusetts, New Jersey, or Pennsylvania Right-to-Know lists:

Wt%	Components	CAS number
60-100%	Homopolymer of Hexamethylene Diisocyanate	28182-81-2
15-25%	Hydrophillic Aliphatic Polyisocyanate	trade secret

New Jersey Environmental Hazardous Substances list and/or RTK Special Hazardous Substances list:

Wt%	Component	CAS number
<0.25%	Hexamethylene 1-6 Diisocyanate	822-06-0

California Prop. 65: To the best of our knowledge, this product does not Contain any of listed chemicals which the state of California has found to Cause cancer, birth defects or other reproductive harm.

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CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: No information available.

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2* FLAMMABILITY: 1 REACTIVITY: 1

NFPA 704M Rating HEALTH: 2 FLAMMIBILITY: 1 REACTIVITY: 1

PREVIOUS MSDS REVISION DATE: N.A.

VOLATILE ORGANIC COMPOUNDS (VOCS): 0.00 lbs/ga 0 grams/liter

LEGEND: N.A. - Not Applicable, N.E. - Not Established,
N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

END OF MSDS