



Material Safety Data Sheet

95 Goodwin Street, East Hartford, CT., 06108 (860) 528-9838

Date Prepared 9/1/2008

SECTION I - IDENTIFICATION

IDENTITY (As Used on Label) Polythane #2 High Solids Hardener

COMMON NAME Aliphatic Polyisocyanate Resin Solution

HAZARD RATING	Health	2
0 = Least	Flammability	1
1 = Slight	Reactivity	1
2 = Moderate	Personal Protection	G
3 = High		
4 = Extreme		

SECTION II - PRODUCT COMPONENTS

	CAS.#	OSHA PEL	ACGIH TLV
Homopolymer of HDI	28182-81-2	N.E. ¹	N.E.
Hexamethylene Diisocyanate (HDI) ²	822-06-0	N.E.	0.005ppm

¹Not Established

²Residual monomer content is less than 0.5% based on resin solids at

T.S.C.A. Status - O.K. on all above components.

FOR SPILL, LEAK, FIRE, OR ACCIDENT, CALL CHEMTREC 24-HOUR EMERGENCY NUMBER 1-800-424-9300

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	N/A	Specific Gravity (H ₂ O = 1)	1.12
Vapor Pressure (mm Hg)	4.7 x 10 ⁻⁷	Melting Point	N/A
Vapor Density (AIR = 1)	>1	Evaporation rate (Butyl Acetate = 1)	N/A
Volatile Organic Compounds (VOC)	0 g/L		
Solubility in Water	NOT SOLUBLE.		
Appearance and Odor	Clear/pale yellowish Liquid, Negligible-Nearly Odorless		

SECTION IV - FIRE and EXPLOSION HAZARD DATA

Flash Point (Closed Cup Method)	460°F	Flammable Limits	LEL	UEL
			N/A	

Extinguishing Media Dry Chemicals, CO₂, Universal Type Foam, Water Fog

Special Firefighting Procedures

Wear full protective equipment including self-contained breathing apparatus. During a fire, HDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Closed container may explode when exposed to extreme heat or burst when contaminated with water (CO₂ evolved).

Unusual Fire and Explosion Hazards

None reported for this product.

SECTION V - REACTIVITY DATA

Stability	Unstable		Conditions to Avoid
	Stable	X	Keep containers closed when not in use.
Incompatibility (Materials to Avoid)	Avoid oxidizers and phosphorus-containing materials.		
Hazardous Decomposition or Byproducts	Fire may yield carbon monoxide and/or carbon dioxide.		
Hazardous Polymerization	May Occur	X	Conditions to Avoid
	Will Not Occur		Contact with moisture or other materials which react with isocyanates or temperatures above 400F.

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	Yes	YES	Yes

Signs and Symptoms of Exposure Irritation and redness of skin and eyes. Breathing difficulty.

Health Hazards (Acute and Chronic)

ACUTE - prolonged skin exposure can cause irritation, dermatitis. Inhalation of vapors can cause nasal and respiratory irritation, dizziness, headache, nausea.

CHRONIC - prolonged or repeated exposure to vapors may cause lung damage as well as increased sensitivity.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	NO	NO	NO

Medical Conditions Generally Aggravated by Exposure

Asthma and other respiratory disorders (bronchitis, emphysema, hyperreactivity), skin allergies, eczema.

Emergency and First Aid Procedures

EYES - Flush with water, holding lids open for 15 minutes or more. Call physician for advice if necessary.

Skin - remove contaminate clothing. Clean affected area with mild soap and water. If irritation or redness develops, seek medical attention.

INHALATION- move person away from source of exposure and into fresh air. If person is not breathing, give artificial respiration and seek medical attention immediately. If breathing difficulty develops, give oxygen and seek medical attention immediately.

****NOTE** PERSONS WITH LUNG DISORDERS OR WHO ARE SENSITIZED SHOULD NOT USE THIS PRODUCT.**

SECTION VII - CONTROL MEASURES

Respiratory Protection (Specify Type) Use NIOSH approved respirator as outlined in 30CFR11 and 29CFR 1910.134 effective for solvent and diisocyanate vapors. Use SCBA or air-supplied respirators when TLV/PEL is exceeded.

Ventilation	Local Exhaust	Use in confined areas.	Special	Explosion proof fans when needed.
	Mechanical	Must be sufficient to maintain area below established TLV/PEL.		

Protective Gloves Neoprene rubber gloves. Eye Protection Splash proof goggles.

Other Protective Clothing or Equipment

Use other protective equipment such as rubber aprons and a face shield if danger of splashing is possible.

Eye wash station or clear water must be readily available. ENFORCE GOOD HYGIENE PRACTICES. No smoking or open lights in work area. Exposure to liquid, vapors, mists or fumes must be minimized. Use air supplied respirators in enclosed areas and when PEL/TLV is higher than established level.

Work/Hygienic Practices Launder contaminated clothing before use. Dispose contaminated leather shoes

SECTION VIII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled

Shut off and eliminate all ignition sources. Keep people away. Add sand, earth or other absorbent to spill area. Ventilate confined spaces. Open windows and doors, minimize breathing vapors and skin contact. Keep spill out of sewers by diking. Observe precautions for volatile, flammable vapors from absorbed material.

Waste Disposal Method

Incineration in accordance with local, state, and federal regulations.

Precautions to be Taken in Handling and Storing Keep containers tightly closed when not in use and away from excessive heat and flame. DO NOT pressurize, cut, weld, solder, drill or grind the containers.

Other Precautions Store in an OSHA approved area for flammable materials.

Prepared by Samet Dy - Urethane Chemist

PLEASE NOTE "The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, Dur-A-Flex, Inc. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use."



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SECTION I - IDENTIFICATION

IDENTITY (As Used on Label) Polythane #2 High Solids Resin

COMMON NAME Polyester Resin Solution

HAZARD RATING	Health	2
0 = Least	Flammability	2
1 = Slight	Reactivity	0
2 = Moderate	Personal Protection	G
3 = High		
4 = Extreme		

SECTION II - PRODUCT COMPONENTS

	CAS.#	OSHA PEL	ACGIH TLV
Polyester Polyol	Proprietary ¹	not hazardous	not hazardous
Propylene Glycol Monomethyl Ether Acetate (PMA)	108-65-6	N.E. ²	N.E.

¹The manufacturer of the component states that they will provide additional information to a health professional in the event of a medical emergency.

²Not Established

T.S.C.A. Status - O.K. on all above components.

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SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	PMA	284°F	Specific Gravity (H2O = 1)	>1
Vapor Pressure (mm Hg)	PMA	3.8	Melting Point	N/A
Vapor Density (AIR = 1)	PMA	4.6	Evaporation rate (Butyl Acetate = 1)	PMA= 0.30
Volatile Organic Compounds (VOC)		320.8 g/L		
Solubility in Water	Appreciable			
Appearance and Odor	Clear liquid. Fruity Aromatic Odor.			

SECTION IV - FIRE and EXPLOSION HAZARD DATA

Flash Point (Closed Cup Method)	PMA	116°F	Flammable Limits	LEL	UEL
			PMA	1.5%	10.0%

Extinguishing Media Dry Chemicals, CO₂, Universal Type Foam, Water Fog

Special Firefighting Procedures

Wear full protective equipment including self-contained breathing apparatus. Water spray may be useful in minimizing vapors and cooling containers exposed to heat and flame. Avoid spreading burning liquid with H₂O used for cooling purposes.

Unusual Fire and Explosion Hazards

This material is flammable and may be ignited by heat or flame.

SECTION V - REACTIVITY DATA

Stability	Unstable		Conditions to Avoid
	Stable	X	Keep containers closed when not in use.
Incompatibility (Materials to Avoid)		Avoid oxidizers and phosphorus - containing materials.	
Hazardous Decomposition or Byproducts		Fire may yield carbon monoxide and/or carbon dioxide.	
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Keep containers closed when not in use.

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	Yes	YES	Yes

Signs and Symptoms of Exposure Irritation and redness of skin and eyes. Breathing difficulty.

Health Hazards (Acute and Chronic)

ACUTE - Irritant to mucous membranes, eye and skin.

CHRONIC - prolonged exposure may be a nasal irritant.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	NO	NO	NO

Medical Conditions Generally Aggravated by Exposure

Preexisting disorders may be aggravated: respiratory tract and lung.

Emergency and First Aid Procedures

EYES - Flush with water, holding lids open for 15 minutes or more. Call physician for advice if necessary.

Skin - remove contaminate clothing. Clean affected area with mild soap and water. If irritation or redness develops, seek medical attention.

INHALATION- move person away from source of exposure and into fresh air. If person is not breathing, give artificial respiration and seek medical attention immediately. If breathing difficulty develops, give oxygen and seek medical attention immediately.

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Respiratory Protection (Specify Type) Use NIOSH approved respirator as outlined in 30CFR11 and 29CFR 1910.134

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Ventilation	Local Exhaust	Use in confined areas.	Special	Explosion proof fans when needed.
	Mechanical	Must be sufficient to maintain area below established TLV/PEL.		

Protective Gloves Neoprene rubber gloves. Eye Protection Splash proof goggles.

Other Protective Clothing or Equipment

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Precautions to be Taken in Handling and Storing Keep containers tightly closed when not in use and away from excessive heat and flame. DO NOT pressurize, cut, weld, solder, drill or grind the containers.

Other Precautions None Known.

Prepared by Samet Dy - Urethane Chemist

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