



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

Material Safety Data Sheet

Date Prepared 8/2/2010

SECTION I - IDENTIFICATION	HAZARD RATING		Health	2
	0 = Least		Flammability	1
	1 = Slight		Reactivity	1
	2 = Moderate		Personal Protection	G
IDENTITY (As Used on Label)		Polythane #2 High Solids Hardener		
COMMON NAME		Aliphatic Polyisocyanate Resin Solution		

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 the time of manufacture.

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	194 °C	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, CO ₂ , 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 (CO ₂ 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.
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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."



DUR-A-FLEX
INNOVATION FROM THE FLOOR UP

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SECTION I - IDENTIFICATION	HAZARD RATING		Health	2
	0 = Least		Flammability	2
	1 = Slight		Reactivity	0
	2 = Moderate		Personal Protection	G
3 = High				
4 = Extreme				
IDENTITY (As Used on Label)	Polythane #2 High Solids Resin			
COMMON NAME	Polyester Resin Solution			

SECTION II - PRODUCT COMPONENTS	CAS.#	OSHA PEL	ACGIH TLV
Polyester Polyol	Proprietary ¹	N.E. ²	N.E.
Propylene Glycol Monomethyl Ether Acetate (PMA)	108-65-6	N.E.	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	145.8 °C	Specific Gravity (H2O = 1)	>1
Vapor Pressure (kPa)	PMA	0.5	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	42 °C	Flammable Limits	LEL UEL
			PMA	1.5% 10.0%
Extinguishing Media	Dry Chemicals, CO ₂ , 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.

****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.
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Other Protective Clothing or Equipment

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Waste Disposal Method

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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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