

SAFETY DATA SHEET

Industrial Use Only



THE HANSON GROUP, LLC
GOOD PEOPLE, GREAT SCIENCE

Date Issued: 02/11/2015
MSDS No: 80-150A
Date Revised: 02/11/2015
Revision No: 1

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT DESCRIPTION: High Solids Urethane
PRODUCT CODE: PolyArmor 80-150 Part-A
GENERIC NAME: Isocyanate

MANUFACTURER

The Hanson Group, LLC
3044 Adriatic Court
Peachtree Corners, GA 30071
Phone: 770-495-9554

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (US Transportation) : (800) 424 - 9300
CHEMTREC (Outside USA) : (703) 527 - 3887

COMMENTS: EMERGENCY TELEPHONE NUMBER: In the event of an emergency involving spills, leaks, fire, exposure, or accident involving this product, contact CHEMTREC. Within the USA, Canada, or US Virgin Islands call CHEMTREC at 1-800-424-9300, 24 hours a day. Outside these areas call (703) 527-3887. Collect calls are accepted.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Clear to slight yellow liquid.

IMMEDIATE CONCERNS: Reacts violently with common materials including water, alcohols, bases, and amines. Eye irritant. Harmful if inhaled. Possible sensitizer.

POTENTIAL HEALTH EFFECTS

EYES: May cause significant irritation to the eyes.

SKIN: Allergic reaction and significant irritation to the skin is possible.

INGESTION: May cause significant irritation to the digestive tract.

INHALATION: Irritating to the nose, throat and respiratory tract.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

CARCINOGENICITY: This product does not contain any ingredients designated by NTP, IARC, ACGIH or OSHA as a probable or suspected human carcinogens.

SENSITIZATION: Possible sensitizer by inhalation and skin contact.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS	EINECS
Hexane, 1,6-Diisocyanato-, Homopolymer	> 60 - 100	28182-81-2	500-060-2
1,6-hexamethylene Diisocyanate	< 0.5	822-06-0	212-485-8

COMMENTS: Criteria for listing components in this MSDS are as follows: Carcinogens are listed at 0.1% or greater; hazardous components according to OSHA 29 CFR 1910.1200 are listed at 1.0% or greater; non-hazardous components are not listed. This is not intended to be the complete compositional disclosure. Refer to section 15 for other regulatory information.

4. FIRST AID MEASURES

EYES: Immediately flush with plenty of water for two minutes. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Have eyes examined and tested by medical personnel.

SKIN: Remove contaminated clothing and immediately wash affected skin area with plenty of soap and water. Seek medical attention. Either discard or wash contaminated clothing and shoes before reuse.

INGESTION: If affected person is conscious and alert, give 2-3 glasses of water to drink and induce vomiting by touching the back of the throat with finger. **DO NOT INDUCE VOMITING** or give anything by mouth to an unconscious person. Seek immediate medical attention. Do not leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult. Seek medical attention if cough or other symptoms develop.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: 160°C (320°F) Closed Cup

AUTOIGNITION TEMPERATURE: 480°C (896°F)

FLAMMABLE CLASS: Not Applicable

EXTINGUISHING MEDIA: Dry Chemical, Foam, or Carbon Dioxide. Water is not recommended due to reaction.

FIRE FIGHTING PROCEDURES: Do not release runoff from fire control methods to sewers or waterways.

FIRE FIGHTING EQUIPMENT: Fire fighting personnel are required to use respiratory and eye protection. Full fire protective equipment (Bunker Gear) and self contained breathing apparatus (SCBA) is recommended to be used for all indoor fires and any significant outdoor fires. SCBA may not be required for small outdoor fires that may easily be extinguished with a portable fire extinguisher.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of Nitrogen, Oxides of Carbon.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on absorbent, such as diatomaceous earth, sawdust, vermiculite, or any appropriate readily available material and sweep or shovel absorbed material into closed containers for disposal. After all visible traces, including ignitable vapors, have been removed thoroughly wash the contaminated area. Do not flush to sewer. If area of spill is porous, remove as much contaminated earth and gravel, etc. as necessary and place in closed containers for disposal.

Wear the appropriate personal protective equipment designated in Section 8, remove the leaking container to a containment area and place into an appropriate container to prevent any further spill.

LARGE SPILL: Construct temporary dikes of dirt or sand to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on absorbent, such as diatomaceous earth, sawdust, vermiculite, or any appropriate readily available material and sweep or shovel adsorbed material into closed containers for disposal. If area of spill is porous, remove as much contaminated earth and gravel, etc. as necessary and place in closed containers for disposal.

Wear the appropriate personal protective equipment designated in Section 8, close or cap leaking

valves and/or block or plug hole in leaking container. Remove the leaking containers to a containment area and place into an appropriate container to prevent any further spill.

Contain material as described above and call the local fire, police, or appropriate emergency response provider for immediate emergency assistance.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of material into sources of water.

GENERAL PROCEDURES: Absorb spill with an emergency spill kit, diatomaceous earth, saw dust or equivalent inert material. Shovel up and dispose of at an appropriate waste disposal facility following applicable laws and regulations.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Store product in original containers. Store container in a secure cool, dry, well ventilated area at 55-85 deg. F. Opened containers should be blanketed with nitrogen gas at atmospheric pressure to avoid reaction with moisture. Contamination with moisture or "basic" compounds can cause dangerous pressure buildup in closed containers.

HANDLING: Use with sufficient ventilation to keep employee exposure below recommended limits. Provide adequate ventilation for storage, handling and use, especially for enclosed or low spaces. Avoid contact of liquid with eyes and prolonged skin exposure. Avoid breathing in vapors, mists, and aerosols. Do not allow product to contact open flame or electrical heating elements because dangerous decomposition products may form.

STORAGE: Store and warehouse product in an appropriate area or facility. Segregate like materials together to avoid negative chemical reactions. Protect materials from excessive exposure to heat. Observe proper storage conditions and temperatures.

STORAGE TEMPERATURE: (55°F) Minimum to (85°F) Maximum

COMMENTS: If bulging of containers occurs, transfer to a well ventilated area and open carefully to relieve pressure then reseal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Hexane, 1,6-Diisocyanato-, Homopolymer	TWA	[1]	[1]	[1]	[1]		.5
	STEL	[1]	[1]	[1]	[1]		1.0
1,6-hexamethylene Diisocyanate	TWA	[1]	[1]	0.005	[1]	[1]	[1]
	STEL	[1]	[1]	[1]	[1]	[1]	[1]
OSHA TABLE COMMENTS:							
1. Not Established							

ENGINEERING CONTROLS: Proper industrial hygiene practices are required for workers and should be achieved through engineering controls including ventilation with a high turn over rate whenever feasible. When such controls are not available or not feasible to achieve full protection, respirators for workers (and others in the area) and other personal protective equipment is mandated. Exhaust air may need to be scrubbed (cleaned) or filtered to reduce environmental contamination and odors.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety goggles or safety glasses with side shields when handling and mixing this material.

SKIN: Wear impervious compatible chemical resistant protective clothing such as neoprene or butyl rubber gloves, aprons, boots or Tyvek coveralls, as appropriate to prevent contact with skin.

RESPIRATORY: For respirator selection and training, seek professional advice. Whenever workplace conditions require a use of a respirator, follow a respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements. Wear an OSHA/NIOSH approved respirator selected on its suitability to provide adequate worker protection for the chemicals used and given working conditions including the level of airborne contamination and presence of sufficient oxygen.

WORK HYGIENIC PRACTICES: Always follow "Good personal hygiene practices" when working with this material.

COMMENTS: Always practice "good personal hygiene" during and after use of this materials, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. DO NOT eat, drink, or smoke in work areas that contain hazardous chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Odorless

COLOR: Clear to pale yellow

VAPOR PRESSURE: 12 mmHg at 50°C (122°F)

FLASHPOINT AND METHOD: 160°C (320°F) Closed Cup

SOLUBILITY IN WATER: Reacts violently

SPECIFIC GRAVITY: 1.130 at 25°C (77°F)

VISCOSITY #1: ~ 700 cPs at 25°C

(VOC): 0.001 g/l

Notes: VOC listed on the MSDS is for this component only. Mixed VOC for the combined product may have a different value. Consult the manufacturer or product data sheet for final mixed product VOC value.

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

STABILITY: This material (product) is stable under normal ambient conditions of temperature and pressure. Follow recommendations for proper storage and use.

POLYMERIZATION: May occur is material is in contact with moisture.

CONDITIONS TO AVOID: Avoid high temperatures, sources of ignition, and moisture.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal oxidative decomposition of this product can produce CO, NO_x, HCN, and HDI vapors. Some curing agents will react to produce a large amount of heat.

INCOMPATIBLE MATERIALS: Water, strong bases, strong acids, strong oxidizing agents, alcohols, and amines.

11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
1,6-hexamethylene Diisocyanate	738	593	60

DERMAL LD₅₀: > 5000 mg/kg (rat)

GENERAL COMMENTS: This product does not contain substances considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.

COMMENTS: The chemical, physical, and toxicological properties have not been thoroughly investigated or tested to the best of our knowledge.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No environmental data has been established or is available for this product.

GENERAL COMMENTS: Avoid contaminating waterways.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: See the manufacturers instructions to mix together with the proper components of multi-component materials, and allow to harden. Dispose solids at an appropriate waste disposal facility according to current applicable laws and regulations.

COMMENTS: Refer to Section 6. Accidental Release Measures for additional information.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated

OTHER SHIPPING INFORMATION: Not a Dangerous Good according to the Australian Dangerous Goods (ADG) code. This material may be hazardous according to the criteria of NOHSC Australia.

AIR (ICAO/IATA)

SHIPPING NAME: Not Regulated

VESSEL (IMO/IMDG)

SHIPPING NAME: Not Regulated

CANADA TRANSPORT OF DANGEROUS GOODS

SHIPPING NAME: Not Regulated

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

FIRE: No PRESSURE GENERATING: No REACTIVITY: Yes ACUTE: Yes CHRONIC: No

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	Wt. %	CERCLA RQ
1,6-hexamethylene Diisocyanate	< 0.5	100 lbs.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: All ingredients in this mixture are listed with the TSCA Chemical Substance Inventory.

CANADA

WHMIS HAZARD SYMBOL AND CLASSIFICATION



Poison

DOMESTIC SUBSTANCE LIST (INVENTORY): This product or its components are listed or exempt from the Canadian Domestic Substance List (DSL). Components not listed have been submitted to Environment Canada.

INTERNATIONAL REGULATIONS: EINECS Inventory Status: The components in this product are listed on or exempt from the European Inventory of Existing Chemical Substances (EINECS) or the European List of Notified Chemical Substance (ELINCS).

Australian Inventory Status: The components in this product are listed on or exempt from the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

PREPARED BY: TAG

REVISION SUMMARY: Revision #: 1. This MSDS replaces the October 31, 2014 MSDS. Any changes in information are as follows: In Section 1: MSDS Product Code

HMIS RATING

HEALTH:	2
FLAMMABILITY:	1
PHYSICAL HAZARD:	1
PERSONAL PROTECTION:	G

MANUFACTURER DISCLAIMER: This MSDS to the best of our knowledge conforms to the requirements of OSHA 29 CFR 1910.1200, 91/155/EEC and summarizes the health and safety hazard information and general guidance on how to safely handle the material at the date of issue. Each user must review the MSDS in the context of how the product will be handled and used in the workplace. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Responsibility for the product sold is subject to our standard terms and conditions, a copy of which is available upon request. This company warrants only that its products meet the specifications stated in the sales contract. Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications. While all the information presented in this document is believed to be reliable and to represent the best available data on these products, NO GUARANTY, WARRANTY, OR REPRESENTATION IS MADE, INTENDED, OR IMPLIED AS TO THE CORRECTNESS, OR SUFFICIENCY OF ANY INFORMATION, OR AS TO THE MERCHANTABILITY OR SUITABILITY OR FITNESS OF ANY CHEMICAL COMPOUNDS OR OTHER PRODUCTS FOR ANY PARTICULAR USE OR PURPOSE, OR THAT ANY CHEMICAL COMPOUNDS OR OTHER PRODUCTS OR THE USE THEREOF ARE NOT SUBJECT TO A CLAIM BY A THIRD PARTY FOR INFRINGEMENT OF ANY PATENT OR OTHER INTELLECTUAL PROPERTY RIGHT. Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. Liability by this company for all claims, whether arising out of breach of warranty, negligence, strict liability, or otherwise, is limited to the purchase price of the material. Products may be toxic and require special precautions in handling. For all products listed, the user should obtain detailed information on toxicity, together with the proper shipping, handling and storage procedures, and comply with all applicable safety and environmental standards. Toxicity and risk characteristics of chemical compounds and other products may differ when used with other materials or in a manufacturing or other process. Those risk characteristics should be determined by the user and made known to handlers, processors, and end users.