

# KRETUS GROUP®



## Safety Data Sheet

### Section 1: Identification

**Product Name:** KRETUS® Polyurethane HP, Part A (Satin, Satin UV, Gloss, Gloss UV)

**Recommended Use:** For residential and industrial use

**Manufacturer:** Kretus Group® 1426 W Collins Ave, Orange, CA 92867

**Telephone:** (714) 681-2286

**24 Hour Emergency Telephone Number:** (800) 255-3924 (CHEMTEL)

Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

**Comments:** To the best of our knowledge, this Safety Data Sheet conforms to the requirements of US OSHA 29 CFR1910.1200, 91/155/EEC and Canadian Hazardous Product Act.

### Section 2: Hazard Identification

**Emergency Overview:** Caution - Contains Hexamethylene Diisocyanate (HDI) (CAS no. 822-06-0). Inhalation of HDI mists or vapors may cause respiratory irritation, breathlessness, chest discomfort, and reduced pulmonary function. Overexposure well above the PEL may result in bronchitis, bronchial spasms and pulmonary edema.

Long-term exposure to isocyanates has been reported to cause lung damage, including reduced lung function which may be permanent. Acute or chronic overexposure to isocyanates may cause sensitization in some individuals, resulting in allergic respiratory reactions including wheezing, shortness of breath and difficulty breathing.

May cause sensitization by skin contact.

MAY CAUSE RESPIRATORY TRACT IRRITATION.

Eye wash fountains and safety showers must be easily accessible.

Handle in accordance with good industrial hygiene and safety practice. Wear protective clothing.

#### GHS Classification

Acute toxicity (Inhalation - mist)	Category 4
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Specific target organ toxicity — single exposure (irritating to respiratory system)	Category 3

#### GHS label elements: Hazard pictograms/symbols



**Signal Word:** WARNING!

#### GHS Hazard Statement:

H317: May cause an allergic skin reaction.

H318: Causes serious eye damage.

H412: Harmful to aquatic life with long lasting effects.

#### Precautionary Statements (Prevention):

P280: Wear protective gloves.

P271: Use only outdoors or in a well-ventilated area.

P260: Do not breathe mist or vapor.

P261: Avoid breathing mist.

P284: In case of inadequate ventilation wear respiratory protection.

P272: Contaminated work clothing should not be allowed out of the workplace.

**Precautionary Statements (Response):**

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P303 + P352: IF ON SKIN (or hair): Wash with plenty of soap and water.

P333 + P311: If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.

P362 + P364: Take off contaminated clothing and wash before reuse.

**Storage:**

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

**Disposal:**

P501: Dispose of contents/container to hazardous or special waste collection point.

**Hazards not otherwise classified**

No specific dangers known, if the regulations/notes for storage and handling are considered.

**General Information:** This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Prolonged contact may result in chemical burns and permanent damage. Repeated or prolonged contact causes sensitization, asthma and eczemas.

Read the entire SDS for a more thorough evaluation of the hazards.

### Section 3: Composition/ Information on Ingredients

**Substances**

Chemical Name	% By Weight	CAS Number
Homopolymer of Hexamethylene Diisocyanate	90-100%	28182-81-2
Hexamethylene Diisocyanate	<0.5%	822-06-0

### Section 4: First-Aid Measures

**General advice:** Seek medical advice or medical attention if condition persists.

**Eye contact:** Rinse immediately with plenty of water for at least 15 minutes.

**Skin contact:** Immediately remove any extraneous chemical, if possible without delay. Take off contaminated clothing and shoes immediately. Wash body off with soap and plenty of water.

**Ingestion:** Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position and turn victim's head to the side. Do not induce vomiting.

**Inhalation:** Move to fresh air. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

**Notes to Physician:** No specific treatment. Treat symptomatically. Call the poison control center immediately if large quantities have been ingested.

### Section 5: Fire-Fighting Measures

**Suitable extinguishing media:** Carbon dioxide (CO<sup>2</sup>). Foam. Dry chemical.

**Specific hazards:** Closed container may forcibly rupture under extreme heat or when content are contaminated with water forming carbon dioxide (CO<sub>2</sub>). Use cold water to cool fire-exposed containers to minimize the risk of rupture. During a fire, isocyanate vapors and other irritating, highly toxic gases may generate by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous.

**Special protective equipment for fire-fighters:** Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Danger of Explosion:** This product does not present an explosion hazard

**Flammable Limits:** Not Available

**Explosion Limits:** Not Available

**Auto-Ignition:** 805°F (430°C)

**Flash Point: Open Cup:** 437°F (225°C), Closed Cup: 338°F (170°C)

### Section 6: Accidental Release Measures

**Personal Precautions:** No action shall be taken involving any personal risk or without suitable training.

Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**Environmental Precautions:** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform authorities if the product has caused environmental pollution (sewers, drains, waterways or soil).

**Methods for Cleaning up:** Stop leak if without risk. Move containers from spill area. Approach release from upwind. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## Section 7: Handling and Storage

**Handling:** Put on appropriate personal protective equipment, PPE (see Section 8). Eating and drinking should be prohibited in areas where this material is handled, stored and processed. Remove contaminated PPE or clothing, wash hands and face before eating and drinking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Use only in area provided with appropriate exhaust ventilation. Empty containers retain product residue and can be hazardous. Do not get in eyes, skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment.

**Storage:** Store between 4 to 30°C (40 to 86°F) in accordance with local regulations away from sources of heat, ignition, and direct sunlight. Store in original container. Keep in a dry, well-ventilated area, and away from incompatible materials (see section 10). Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled, unapproved or reactive containers. Use appropriate containment to avoid environmental contamination.

## Section 8: Exposure Controls/ Personal Protection

Components with workplace control parameters:

Component	CAS	General Exposure Limits	General Exposure Limits
Aliphatic Polyisocyanate	28182-81-2	TWA 0.5 mg/m <sup>3</sup>	STEL 1.0 mg/m <sup>3</sup> (15-min)
Hexamethylene Diisocyanate (<0.5%)	822-06-0	ACGIH TWA 0.005 ppm	CLV 0.02 ppm

OSHA PEL (TWA): Not Determined

NIOSH REL (TWA): Not Determined

**Engineering measures:** Work in well ventilated area. Provide natural or explosion-proof fan to ensure adequate ventilation, especially in confined area. Avoid contact with skin, eyes, and clothing.

**Environmental exposure controls:** Construct a dike to prevent spreading. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Hygiene Measures:** Wash hands, forearms and face thoroughly after handling chemical products, before eating and drinking, smoking or using the lavatory and at the end of the working period. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protection:**

**Respiratory** - In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Eyes** - Splash proof safety glasses.

**Skin** - Rubber or plastic apron. Rubber or plastic gloves. Long sleeved clothing or wear protective sleeves. Remove and wash contaminated clothing before re-use.

**Other protective equipment information:** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Neoprene gloves. PVC disposable gloves. Nitrile rubber. Butyl-rubber. Impervious gloves. (The breakthrough time of the selected glove(s) must be greater than the intended use period.)

## Section 9: Physical and Chemical Properties

Information on Physical and Chemical Properties

Form:	Liquid
Odor:	Mild
Color:	Clear, Pale Yellow
PH Value:	Not Applicable
Boiling Point:	(>150°C)
Melting Point:	Not Applicable
Vapor Pressure:	4.7x10 <sup>-7</sup> mmHg @ 70°F
Vapor Density:	Not Applicable
Density (Nominal):	>1.0 g/cm <sup>3</sup> @ 70°F
Solubility in water:	Reacts with water
Evaporation Rate (Butyl Acetate = 1):	Not Applicable
Volatile Organic Compounds:	Nil

## Section 10: Stability and Reactivity

**Chemical stability:** Stable under normal conditions.

**Conditions to avoid:** Moisture. Excessive Heat.

**Materials to avoid:** Water, alcohols, amines, acids, strong bases, substances/products that react with isocyanates.

**Hazardous decomposition products:** Carbon dioxide. Carbon monoxide. Hydrogen cyanide. Nitrogen oxides. Aromatic isocyanates. Gases/vapors

**Hazardous polymerization:** Under normal conditions hazardous polymerization will not occur.

### Section 11: Toxicological Information

#### Acute toxicity

**Oral:** LD50/rat: >5000 mg/kg

**Sensitization:** Guinea pig: sensitizing

**Inhalation Sensitization:** Guinea pig: No

**Human:** Long term studies show over-exposure may cause irritation of eyes, nose, throat and asthma.

### Section 12: Ecological Information

#### Ecotoxicity Effects

<b>Biodegradability</b>	28 days, 13%	Not readily biodegradable
<b>Acute Fish Toxicity</b>	96 hr, LC50/Zebra Fish	66 mg/L
<b>Aquatic Invertebrates</b>	48 hr, EC50/Daphnia Magna	88 mg/L
<b>Plants</b>	72 hr EC50/Scenedesmus Subspicatus	113 mg/L

Harmful to aquatic organisms. May cause long term damage to environment

### Section 13: Disposal Considerations

**Waste Treatment Methods:** Dispose in accordance with Federal, State, and Local laws and regulations. The generation of waste should be avoided or minimized wherever possible. Empty containers should be taken to an approved waste handling site for recycling or disposal. Incineration or landfill should only be considered when recycling is not feasible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Empty Container Precautions:** Do not heat or cut container with electric or gas torch. Recondition or dispose of empty container in accordance with governmental laws and regulations. Do not reuse empty container without proper cleaning. Label precautions also apply to this container when empty.

### Section 14: Transport Information

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Transport Hazard Class(es)	14.4 Packing Group
<b>DOT</b>	*Not Regulated	Not Regulated	Not Regulated	Not Regulated
<b>IMO/IMDG</b>	*Not Regulated	Not Regulated	Not Regulated	Not Regulated
<b>IATA/ICAO</b>	*Not Regulated	Not Regulated	Not Regulated	Not Regulated
<b>TDG</b>	*Not Regulated	Not Regulated	Not Regulated	Not Regulated

### Section 15: Regulatory Information

Country	Regulatory List	Notification
USA	TSCA	Included on Inventory
EU	EINECS	Listed under Polymer Exempt
Canada	DSL	Included on Inventory
China	SEPA	Included on Inventory
Japan	ENCS	Included on Inventory

OSHA – This product is considered a hazardous chemical under 29 CFR 1910.1200.

RCRA – Not a hazardous waste.

Clean Air Act Section 112 - Hexamethylene Diisocyanate 822-06-0

SARA Section 311 AND 312 - This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: ACUTE, CHRONIC

SARA Section 313 - This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: None

SARA Extremely Hazardous Substance (EHS) –

Component	CAS	% By Weight	RQ
Hexamethylene Diisocyanate	822-06-0	<0.5	100 lb

**California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)** - This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other reproductive harm.

**Canada WHMIS** – Class D2B; Material causing other toxic effects.

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations and the SDS contain all the information required by the Controlled Products Regulations

### Section 16: Other Information

#### Hazardous Material Information System (HMIS):

<i>Scale 0-4</i>		<i>NFPA</i>	<i>HMIS</i>
4=Severe Hazard	Health	1	1
3=Serious Hazard	Flammability	2	2
2=Moderate Hazard	Reactivity	1	1
1=Slight Hazard			
0=Minimal Hazard			

**Personal Protection:** Safety goggles, neoprene rubber gloves, vapor respirator

#### Disclaimer

The information and recommendations presented herein are accurate to the best of our knowledge. User must conduct their own tests to determine the suitability of these products for their particular purposes and usage. Because of numerous factors affecting results, KRETUS GROUP® and its affiliation makes no warranty of any kind, express or implied, including those of merchantability and fitness for purpose, other than material conforms to our applicable current specifications. KRETUS GROUP® assumes no legal responsibility for use or reliance on the information contained in this safety data sheet.

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