



Material Safety Data Sheet

GatorHyde DLX UV Component A

MANUFACTURER
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1- Product Identity

Product Code: 2074
Product Name: GatorHyde DLX UV **Component A**
Chemical Name: Cycloaliphatic Diisocyanate Prepolymer Based Resin
Chemical Formula: Not Applicable (Product is a mixture)
Chemical Family: Aliphatic Isocyanate Prepolymer

2- Hazardous ingredients

Chemical Name	CAS #	%	OSHA PEL	ACGIH TLV
Isophorone Diisocyanate	4098-71-9	*	0.005 ppm TWA 0.020 Mg/m ³ STEL	0.005 ppm TWA

* Monomer content is less than 1.0% monomeric IPDI based on resin solids at the time of manufacture.

3- Hazards identification

Potential Health Effects:

Route (s) of Entry: Skin Contact- from liquid and aerosols (spray applications)
Inhalation- although IPDI is low in volatility, an inhalation hazard can exist from spraying.

Human Effects and Symptoms of Over-exposure:

Acute Inhalation: IPDI vapors or mist at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with pre-existing nonspecific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as an asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms can be delayed up to several hours after exposure.

Chronic Inhalation: As a result of previous repeated overexposures or in a single large dose, certain individuals develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed (up to several hours after exposure). Similar to many non-specific 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. Over-exposure to isocyanates has also been reported to cause lung damage (including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent.

Acute Skin Contact: Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms: reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove.

Chronic Skin Contact: Prolonged contact can cause reddening, swelling, rash, scaling, blistering and in some cases, skin sensitization. Individuals who have skin sensitization can develop these symptoms from contact with liquid or vapors. Animal tests have indicated that respiratory sensitization can result from skin contact with IPDI. This data reinforces the need to prevent skin contact with IPDI.

Acute Eye Contact: Liquid aerosols or vapors are irritating and can cause tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. However, damage is usually reversible.

Chronic Eye Contact: May result in corneal opacity.

Acute Ingestion: Can result in irritation and corrosive action in the mouth, stomach tissue and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting, and diarrhea.

Chronic Ingestion: None found.

Carcinogenicity: Neither IPDI nor polymeric IPDI are listed by the NTP, IARC, or regulated by OSHA as carcinogens.

NTP:	Not Listed
IARC	Not Listed
OSHA	Not Listed

Other: See Results of two year inhalation study in toxicological information.

Medical Conditions Aggravated by Exposure: Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyperactivity, skin allergies, eczema).

4- FIRST AID MEASURES

First Aid for Eyes: Flush with copious amounts of water, preferably lukewarm water for at least 15 minutes, holding eyelids open all the time. Refer individual to a physician or ophthalmologist for immediate follow-up.

First Aid for Skin: Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. For severe exposures, get under safety shower after removing clothing, then get medical attention. For lesser exposures, seek medical attention if irritation develops or persists after the area is washed.

First Aid for Inhalation: Move to an area free from risk of further exposure. Administer oxygen or artificial respiration if needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Consult physician if this should occur.

First Aid for Ingestion: Do not induce vomiting! Give 1 to 2 cups of milk or water to drink. Do not give anything by mouth to an unconscious person. Consult physician.

5- FIRE FIGHTING MEASURES

Flash Point: >200°F Pensky-Martens closed cup (ASTM D-93)

Extinguishing Media: Dry chemical; carbon dioxide; foam; water spray for large fires.

Special Fire Fighting Procedures: Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, IPDI vapors and other irritating highly toxic gases may be generated by thermal decomposition or combustion. At temperature greater than 400°F, polymeric IPDI can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible. Therefore, use cold water to cool fire exposed containers.

6- ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment, including respiratory equipment during clean-up. Cover spill with sawdust, Vermiculite, Fuller's Earth (or other absorbent materials) pour decontamination solution over entire area and allow 10 minutes reaction time. Collect material in open containers and allow to stand for 48 hours. Wash down spill with decontamination solution. Decontamination solution include: Union Carbide's Tergitol TMN 10 (20%) and water (80%).

7- HANDLING AND STORAGE

Storage Temperature (Min/Max): 60°F to 122°F

Shelf Life: Six Months at 77°F

Special Sensitivity: If container is exposed to high heat, it can be pressurized and possibly rupture. IPDI reacts slowly with water to form CO₂ gas. This gas can cause sealed containers to expand and possibly rupture.

Handling/Storage Precautions: Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors. Employee education and training in the safe use and handling of this compound are required under the OSHA Hazard Communication Standard.

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8- PERSONAL PROTECTION

Eye Protection Requirements: Liquid chemical goggles. Vapor resistant goggles should be worn when contact lenses are in use. In a slash hazard environment chemical goggles should be used in combination with a full face shield.

Skin Protection Requirements: Permeation resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water. Cover as much of the exposed skin area as possible appropriate clothing. A tyvek suit is preferable to reduce to possible amount of skin contact.

Ventilation Requirements: Local exhaust should be used to maintain levels below the TLV whenever IPDI is processed, heated or spray applied. Consult the ACGIH Industrial Ventilation guidelines for adequate ventilation.

Respirator Requirements: Concentrations greater than the TLV can occur when IPDI is sprayed or heated in a poorly ventilated area. A respirator fitted with activated charcoal is always recommended while spray applying this product. In some cases a supplied air apparatus should be used.

Monitoring Requirements: Isocyanate exposure levels must be monitored. Monitoring techniques have become available through NIOSH and OSHA.

9- PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:	Liquid	Color:	Clear/Pale Yellow
Odor:	Negligible	Odor Threshold:	Not Established
pH:	Not applicable	Boiling Point:	382°F
Melting/Freezing Point:	Not Estab.	Viscosity:	Not applicable
Bulk Density:	9.5 Lb./Gal	Specific Gravity:	1.14 @ 77°F
Vapor Pressure:	<7.5 X 10 ⁻⁵ mmHG	% Vol. By Weight:	negligible@ 77°F for MDI
Vapor Density:	8.5 (MDI) (air = 1)		
Sol. In Water:	Not soluble (reacts to liberate CO ₂ gas)		

10- STABILITY AND REACTIVITY

Stability: This is a stable material.

Hazardous Polymerization: May occur. Contact with other materials which react with isocyanates or temperature above 400°F.

Incompatibilities: Water, amines, strong bases, alcohols, Metals. Will cause some corrosion to copper alloys and aluminum.

Instability Conditions: None known.

Decomposition Products: By high heat and fire: carbon dioxide, carbon monoxide, oxides of nitrogen, traces of HCN, IPDI

11- TOXICOLOGICAL INFORMATION

Toxicity Data For: No data
Acute Toxicity: Oral LD50-
 Dermal LD50-
 Inhalation LC50-

Eye Effects: No data

Skin Effects: No data

Sensitization: IPDI has been shown to produce dermal sensitization in laboratory animals. Evidence of respiratory sensitization has also been observed in guinea pigs. In addition, there is evidence of cross- sensitization of between different types of diisocyanates.

Sub Chronic Toxicity: In a combined chronic inhalation toxicity/oncogenicity study, rats were exposed to an aerosol of IPDI for six hours per day, 5 days per week for one or two years. The exposure concentrations were 0, 0.2, 1.0, and 6.0 mg/m³. Microscopic examination of tissues revealed the effects of irritation to the nasal cavity and lungs in animals exposed to 14 mg/m³.

12- ECOLOGICAL INFORMATION

Ecology Data For: IPDI
Aquatic Toxicity: No Data Available

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13- DISPOSAL CONSIDERATIONS

Waste Disposal Method: Waste must be disposed of according to federal, state and local laws. Incineration is the preferred method.

Empty Container Precautions: Empty containers must be handled with care due to product residue. Decontaminate container prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. Do not heat or cut empty container with a electric or gas torch. Gases may be highly toxic.

14- TRANSPORTATION INFORMATION

Technical Shipping Name: None
 Freight Class Bulk: None
 Freight Class Package: None
 Product Label: Product label established

DOT (Domestic Surface) Non-Regulated (in 55 gallon drums)
 IMO/IMDG Code (Ocean) Non-Regulated
 ICAO/IATA (Air) Non-Regulated

15- REGULATORY INFORMATION

OSHA: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA: On TSCA inventory

CERCLA Reportable Inventory: NA

SARA Title III: Section 302 Extremely Hazardous Substances: None
 Section 311/312 Hazard Categories: Immediate health hazard, delayed health hazard, reactive hazard
 Section 313 Toxic Chemicals: Isophorone Diisocyanate

RCRA Status: IPDI is not listed as a hazardous waste.

16- OTHER INFORMATION

NFPA 704M Ratings:	Health	Flammability	Reactivity	Other
	3	1	1	

HMIS Ratings:	Health	Flammability	Reactivity
	3*	1	1

*Indicates a chronic health hazard

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