

KRETUS®

Safety Data Sheet

**SECTION 1: IDENTIFICATION****Product Name: KRETUS® Hydrothane, Part B****Recommended Use:** For professional use only.**Manufacturer:** Kretus, 1055 W. Struck Ave., Orange, CA 92867**Telephone:** (714) 694-2061**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.

SECTION 2: HAZARD IDENTIFICATION**GHS Classification of the substance or mixture**

Acute tox., Inhalative, Category 4 (H332)

Sensitization of the Skin, Sub-category 1B (H317)

Chronically hazardous to the aquatic environment, Category 3 (H412)

Specific Target Organ toxicity (single exposure), Category 3 (H335)

**Signal Word: Warning****Hazard Statements:**

H332 Harmful if inhaled

H317 May cause an allergic skin reaction

H335 May cause respiratory irritation

H412 Harmful to aquatic life with long lasting effects

Precautionary Statements

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P271 Only use outdoors or in a well ventilated area

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

P280 Wear protective gloves/clothing/eye protection/face protection

Emergency Statements

P302+P352 If on skin: wash with plenty of soap and water
 P333+P313 If skin irritation or rash occurs, get medical advice/attention
 P362+P364 Take off contaminated clothing and wash before reuse
 P304+P312 If inhaled, Call a Poison Center or doctor/physician if you feel unwell
 P403+P233 Store in a well-ventilated place. Keep container tightly closed

Storage: Keep container tightly closed and locked in a cool, well-ventilated place.

Disposal: Dispose of contents/container to an approved waste disposal plant in accordance with applicable laws and regulations, and product characteristics at time of disposal.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Chemical Name	CAS No.	Concentration (% by Weight)
Hydrophilic Polyisocyanate	N/A	>=99.8%

SECTION 4: FIRST-AID MEASURES

Contact with Eyes

Hold the eyes open and rinse with preferably lukewarm water for a sufficiently long period of time (at least 10 minutes). Contact ophthalmologist.

Contact with Skin

In case of skin contact wash affected areas thoroughly with soap and water. Consult a doctor in the event of a skin reaction.

Inhalation

Take the person into fresh air and keep warm, allow for adequate rest. If there is difficulty breathing, medical advice is required.

Ingestion

DO NOT induce vomiting. Medical advice is required.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon Dioxide (CO₂), Foam, extinguishing powder, in case of larger fires, water spray should be used.

Special Risks

Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen, isocyanate vapors and traces of hydrogen cyanide. IN the even of fire and/or explosion, do not breath fumes.

Special Protective Equipment for Fire-Fighting

During fire-fighting, respirator with independent air supply and airtight garment is required. Do not allow contaminated extinguishing water to enter the soil, ground water or surface waters.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures**For Non-Emergency Personnel:**

Put on protective equipment (see section 8). Ensure adequate ventilation/exhaust extraction. Keep unauthorized persons away.

Environmental Precautions:

Do not allow to escape into waterways, wastewater or soil.

Methods and Materials for Containment and Clean-up:

Remove mechanically; cover the remainder with wet, absorbent material (e.g. sawdust, chemical binder based on calcium silicate hydrate, sand). After approx. one hour transfer to waste container and do not seal (evolution of CO₂!). Keep damp in a safe ventilated area for several days.

SECTION 7: HANDLING AND STORAGE**Precautions for Safe-Handling**

Provide sufficient air exchange and/or exhaust in work rooms. Exhaust ventilation necessary if product is sprayed. The threshold limit values noted in Chapter 8 must be monitored. In all areas where isocyanate aerosols and/or vapor concentrations are produced in elevated concentrations, exhaust ventilation must be provided in such a way that the workplace exposure limits (WEL) is not exceeded. The air should be drawn away from the personnel handling the product

The personal protective measures described in Chapter 8 must be observed. The precautions required in the handling of isocyanates must be taken. Avoid contact with skin and eyes and the inhalation of vapor.

Keep away from foodstuffs, drinks and tobacco. Wash hands before breaks and at end of work and use skin-protecting ointment. Keep working clothes separately. Take off all contaminated clothing immediately.

Conditions for Safe Storage

Keep container dry and tightly closed in a cool and well ventilated place. Further information on the storage conditions which must be observed to preserve quality can be found in our product information sheet. The product will keep stable for at least twelve months when stored in its sealed original packaging at temperatures between 5°C and 35°C.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiratory protection: Respiratory protection required in insufficiently ventilated working areas and during spraying. An air-fed mask, or for short periods of work, a combination of charcoal filter and particulate filter is recommended. In case of hypersensitivity of the respiratory tract and skin (e.g. asthmatics and those who suffer from chronic bronchitis and chronic skin complaint) it is inadvisable to work with the product.

Eye/face protection: Wear eye/face protection.

Skin protection: Suitable materials for safety gloves; EN 374:

Butyl rubber - IIR: thickness ≥ 0.5 mm; breakthrough time ≥ 480 min. Fluorinated rubber - FKM (≥ 0.4 mm)

Recommendation: contaminated gloves should be disposed of.

Other Precautions: Wear suitable Protective Clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid, Colorless to yellowish transparent
Odor	Slight inherent odor
Odor Threshold	Not established
pH	Not applicable
Melting/Freezing Point	ca. -22°C
Initial Boiling Point and Boiling Range	>300°C (at 1,013 hPa)
Flash Point	ca. 196°C (at 1,013 hPa)
Evaporation Rate	Not established
Flammability	Not applicable
Upper/Lower Flammability or Explosive Limits	Not established
Auto-ignition Temperature	Not applicable
Vapor Pressure	Ca. 17 hPa (at 20°C) Ca. 26 hPa (at 50°C) Ca. 28 hPa (at 55°C)
Vapor Density	Not established
Density	Ca. 1.16 g/cm ³ at 20°C
Relative Density/Specific Gravity	Not established
Solubility(ies)	Not established
Partition Coefficient: n-octanol/water	No established
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not established
Viscosity	Ca. 1500-3500 mPa.s (at 25°C)
VOC (Volatile Organic Compounds)	g/L

SECTION 10: STABILITY AND REACTIVITY

Possibility of hazardous reactions: Exothermic reaction with amines and alcohols; reacts slowly with water forming CO₂, in closed containers risk of bursting owing to increase of pressure.

Hazardous decomposition products: On drying of the coating / hardening release of neutralising agent. (see section 3).

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological studies on the product are not yet available. Please find below the data available to us:

Acute toxicity, oral:

Hydrophilic Polyisocyanate

LD50 rat: >= 5.000 mg/kg

Method: OECD Test Guideline 423

Toxicological studies of a comparable product.

Acute toxicity, dermal

No data available.

Acute toxicity, inhalation

No data available.

Primary skin irritation

Hydrophilic Polyisocyanate

Species: rabbit

Result: An irritant effect cannot be distinguished from a mechanical load caused by the removal of the test specimen.

Classification: No skin irritation

Method: OECD Test Guideline 404 Toxicological studies of a comparable product.

Primary mucosae irritation

Hydrophilic Polyisocyanate

Species: rabbit

Result: slight irritant

Classification: No eye irritation

Method: OECD Test Guideline 405 Toxicological studies of a comparable product.

Sensitisation

Hydrophilic Polyisocyanate

Skin sensitization (local lymph node assay (LLNA)):

Species: Mouse

Result: positive

Classification: May cause sensitization by skin contact (Sub cat. 1B) **Method:** OECD Test Guideline 429 Toxicological studies of a comparable product.

Subacute, subchronic and prolonged toxicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity/Fertility

No data available.

Reproductive toxicity/Teratogenicity

No data available.

Genotoxicity in vitro

Hydrophilic Polyisocyanate

Test type: Salmonella/microsome test (Ames test) **Result:** No indication of mutagenic effects. **Method:** OECD Test Guideline 471

Toxicological studies of a comparable product.

Genotoxicity in vivo

No data available.

STOT evaluation – one-time exposure

Hydrophilic Polyisocyanate

May cause respiratory irritation. Studies of a comparable product.

STOT evaluation – repeated exposure

No data available.

Aspiration toxicity

No data available.

Additional information

Special properties/effects: Over-exposure entails the risk of concentration-dependent irritating effects on eyes, nose throat, and respiratory tract. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible. Hypersensitive persons may suffer from these effects even at low isocyanate concentrations, including concentrations below the occupational exposure limit.

Prolonged contact with the skin may cause tanning and irritant effects.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological studies of the product are not available. Do not allow to escape into waterways, wastewater or soil. Please find below the data available to us:

Acute Fish toxicity

Hydrophilic Polyisocyanate

LC50 35,2 mg/l

Species: Danio rerio (zebra fish)

Exposure duration: 96 h

Method: OECD Test Guideline 203 Ecotoxicological reports on a comparable product

Acute toxicity for daphnia

Hydrophilic Polyisocyanate

EC50 > 100 mg/l

Species: Daphnia magna (Water flea)

Exposure duration: 48 h

Method: OECD Test Guideline 202 Ecotoxicological reports on a comparable product

Acute toxicity for algae

Hydrophilic Polyisocyanate

ErC50 72 mg/l

Species: Desmodesmus subspicatus (Green algae) Exposure duration: 72 h

Method: OECD Test Guideline 201

Ecotoxicological reports on a comparable product

Acute bacterialtoxicity

Hydrophilic Polyisocyanate

EC50 > 10.000 mg/l

Species: activated sludge

Method: OECD Test Guideline 209 Ecotoxicological reports on a comparable product

Biodegradability

Hydrophilic Polyisocyanate

Biodegradation: 0 %, 28 d, i.e. not readily degradable Method: OECD Test Guideline 301 F

Ecotoxicological reports on a comparable product

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

Other adverse effects

Isocyanate reacts with water at the interface forming CO₂ and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by watersoluble solvents. Previous experience shows that polyurea is inert and non-degradable.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste should be disposed of according to local, state, and federal regulations. Chemical residues are generally classified as special waste, and as such are covered by regulations which vary according to location. Contact your local waste disposal authority for advice or pass to a chemical disposal company. Dispose of containers with care.

SECTION 14: TRANSPORT INFORMATION

[SIGNAL WORD & DOT SYMBOL]

	UN Number	UN Proper Shipping Name	Transport Hazard Class(es)	Packing Group	Environmental Hazards
DOT	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods
IMO/IMDG	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods
IATA/CAO	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code.

SECTION 15: REGULATORY INFORMATION

Schedule 6 (Standard for the Uniform Scheduling of Medicines and Poisons)
Any existing national regulations on the handling of isocyanates must be observed.

SECTION 16: OTHER INFORMATION

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

Prepared by Kretus, Inc.

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Revision Note No information available.

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® 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® assumes no legal responsibility for use or reliance on the information contained in this safety data sheet.