



KRETUS®

Safety Data Sheet

SECTION 1: IDENTIFICATION

Product Name: KRETUS® Polyurethane HS or PUHS or HS, Part A (EZ or FC)

Recommended Use: For residential and industrial use

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.

SECTION 2: HAZARD IDENTIFICATION

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Flammable liquids: Category 2

Serious eye damage/eye irritation: Category 2A

Skin sensitization: Category 1

Carcinogenicity: Category 2

Specific target organ toxicity (repeated exposure): Category 2

DANGER

Flammable liquid and vapor. Causes skin irritation and serious eye irritation. May cause respiratory irritation or an allergic skin reaction. Toxic to aquatic life with long-lasting effects.



Keep container tightly closed and away from heat/sparks/open flames/hot surfaces. - No smoking. Use explosion-proof electrical/ventilating/lighting equipment and only non-sparking tools. Take precautionary measures against static discharge. Ground/bond container and receiving equipment.

Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling.

In case of fire, use dry chemical to extinguish.

IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

Store container tightly closed and locked up in a cool/well-ventilated place. Dispose of contents/container according to local, state and federal regulations.

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)
Parachlorobenzotrifluoride	000098-56-6	10-30%
Aspartic ester		60-85%
Monoaspartate		5-10%
Aliphatic carboxylic ester		1-5%

SECTION 4: FIRST-AID MEASURES

Contact with Eyes

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Contact with Skin

Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion

If ingested, do not induce vomiting. Parachlorobenzotrifluoride is not soluble. Do not give fluids. If spontaneous vomiting is inevitable, prevent aspiration by keeping the victim's head below the knees. Get medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

Special Protective Equipment for Fire-Fighting

Wear protective clothing and self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Cool exposed containers with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Wear suitable protective equipment. Prevent unnecessary people from area of spill. Cover with absorbent material such as sand or earth.

Environmental Precautions:

Collect and dispose in accordance with federal, state, and local laws and regulations. Prevent runoff into open drains and waterways.

Methods and Materials for Containment and Clean-up:

Dispose of in accordance with all federal, state, and local laws. Dispose of empty containers in accordance with government regulations. Do not reuse empty containers without proper cleaning.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe-Handling

Use self-contained breathing apparatus if airborne concentration is unknown or mist from spraying occurs in an area with limited ventilation. Use local exhaust as necessary to control airborne vapors or mists. Use of ventilated curing ovens is recommended.

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. 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 release to the environment.

Conditions for Safe Storage

Store between 40 to 100°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.

Incompatible Materials or Ignition Sources

Hazardous polymerization does not occur. Avoid oxidizing agents. Avoid heat, flames and sparks.

Hazardous decomposition products include chlorine and fluorine containing gases, carbon dioxide, carbon monoxide, and other undetermined compounds.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Parachlorobenzotrifluoride	TWA: 20 ppm	TWA: 20 ppm	TWA: 20 ppm
Aspartic ester	Not established	Not established	Not established
Monoaspartate	Not established	Not established	Not established
Aliphatic carboxylic ester	Not established	Not established	Not established

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

Appearance	liquid; slight yellow
Odor Threshold	<1 ppm
pH	not established
Melting/Freezing Point	not established
Initial Boiling Point and Boiling Range	136 -138°C (277- 280°F)
Flash Point	43°C (109°F), closed cup
Evaporation Rate	<1
Upper/Lower Flammability or Explosive Limits	not applicable
Explosion Limits: lower	not applicable
Auto-ignition Temperature	not applicable
Vapor Pressure	4.5 kPa (34 mm Hg) [at 20°C]
Vapor Density	3.94 [Air = 1]
Relative Density	1.08
Water Solubility(ies)	Negligible
WPG	8.96 – 9.06
VOC	<100 g/L

SECTION 10: STABILITY AND REACTIVITY

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Parachlorobenzotrifluoride	>6.8 g/kg (rat)	>2.7 g/kg (rabbit)	>4479 ppm (rat)
Aspartic ester	Not established	Not established	Not established
Monoaspartate	Not established	Not established	Not established
Aliphatic carboxylic ester	Not established	Not established	Not established

Mutagenic Effects No information available
 Reproductive Effects No information available.
 Developmental Effects No information available.
 Teratogenicity No information available.
 STOT - single exposure Central nervous system (CNS)
 STOT - repeated exposure Kidney Liver spleen Blood
 Aspiration hazard No information available
 Symptoms / effects, both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: May cause pulmonary edema: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
 Endocrine Disruptor Information No information available
 Other Adverse Effects The toxicological properties have not been fully investigated.

SECTION 12: ECOLOGICAL INFORMATION

Prevent from entering sewer or waterway. This material is not expected to be harmful to aquatic life. Component Analysis - Ecotoxicity - Aquatic Toxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Parachlorobenzotrifluoride	IC50 (72 hr.) (Green & Blue-green algae) 500 mg/L	LC50 (96 hr.) (Rainbow trout) 13.5 mg/L LC50 (96 hr.) (Bluegill sunfish) 12.0 mg/L MATC (31 day) (Fathead minnow) >0.54		LC50 (48 hr.) (Water flea) 12.4 mg/L MATC (21 day) (Water flea) >0.03 < 0.05 mg/L*

Persistence and Degradability Persistence is unlikely based on information available.
 Bioaccumulation/ Accumulation No information available.
 Mobility Will likely be mobile in the environment due to its volatility

Component	LOG KOW
Parachlorobenzotrifluoride	3.7

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose in accordance with federal, state, and local 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.

SECTION 14: TRANSPORT INFORMATION

DANGER



	UN Number	UN Proper Shipping Name	Transport Hazard Class(es)	Packing Group	Environmental Hazards
DOT	UN1866	Resin Solution	3	III	Marine Pollutant
IMO/IMDG	UN1866	Resin Solution	3	III	Marine Pollutant
IATA/CAO	UN1866	Resin Solution	3	III	Marine Pollutant

The transportation information listed above is suitable for all modes of transportation. TDG, IMO/IMDG, ICAO/IATA, 49 CFR

Limitations: 49 CFR 173.27 and 175.75 – Cargo Aircraft Only: 220 L; Passenger Aircraft: 60 L

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations

OSHA: This product is considered hazardous.

CERCLA SARA Hazard Category:

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: Immediate. Fire. Acute Health Hazard. Chronic Health Hazard.

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:

Component	CAS No.
Parachlorobenzotrifluoride	000098-56-6

U.S. State Regulations



WARNING: This product can expose you to PCBTF (Parachlorobenzotrifluoride), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

WHMIS Classification

B2- Flammable Liquid

D2B- Toxic Material

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

HMIS	HMIS
Health	2
Flammability	3

Reactivity	0
<p>Personal Protection: Safety goggles, neoprene rubber gloves, vapor respirator</p> <p>Prepared by Kretus, Inc.</p> <p>Revision Date 1/17/23</p> <p>Revision Note Reformatting</p> <p>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.</p>	