

# KRETUS®



## Safety Data Sheet

### SECTION 1: IDENTIFICATION

**Product Name:** KRETUS® Poly ESD, PART A - EZ - CONDUCTIVE or DISSIPATIVE

**Recommended Use:** For professional use only.

**Manufacturer:** KRETUS® Inc., 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

#### Emergency Overview

May cause sensitization by skin contact (H317). Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment (H412).

#### WARNING

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long-lasting effects.



#### Prevention:

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

P171: Use only outdoors or in a well-ventilated area.

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

#### Response:

P370 + P378: In case of fire, use carbon dioxide, dry chemical or foam for extinction.

P303+P361+P353: IF ON SKIN (or hair), Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340: IF INHALED, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P311: IF SWALLOWED, immediately call a POISON CENTER or doctor/physician.

P305+P351+P338: IF IN EYES, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P331: Do NOT induce vomiting.

P332+P313: If skin irritation occurs, get medical advice/attention.

P337+P313: If eye irritation persists, get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

P370+P378: In case of fire, use carbon dioxide, dry chemical or alcohol-resistant foam for extinction.

**Storage:**

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

P235: Keep cool.

**Disposal:**

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other Information:** No data available.

**Carcinogenicity:** No carcinogenic substances as defined by IARC, NTP and/or OSHA.

See Section 12 for Ecological Information.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

The specific chemical identity and exact concentration of composition has been withheld as a trade secret.

Chemical Name	CAS No.	Concentration (% by Weight)
Aspartic Acid, N, N'-[methylenebis(2-methyl-4,1-cyclohexanediyl)]bis-,1,1'4,4''-tetraethyl ester	136210-32-7	80-90%
dimethyl glutarate	1119-40-0	1-5%
dimethyl adipate	627-93-0	1-5%
2,3-epoxypropyl neodecanoate	26761-45-5	<1%
Polymer	Trade Secret	<1%
Single wall carbon nanotubes	7440-44-0	<1%
Alkylolammonium salt	398475-96-2	<1%

See Section 11 for Toxicological Information.

### SECTION 4: FIRST-AID MEASURES

**Contact with Eyes**

In case of contact, flush eyes with plenty of lukewarm water. Use fingers to ensure that eyelids are separated and the eye is being irrigated. Get medical attention.

**Contact with Skin**

In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Thoroughly clean shoes before reuse. Wash clothing and other apparel before reuse.

**Inhalation**

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

**Ingestion**

If ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

**SECTION 5: FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Use carbon dioxide, foam, and dry chemical. Use water spray to keep fire-exposed containers cool.

**Unsuitable Extinguishing Media**

High volume water jet.

**Unusual Fire and Explosion Hazards**

Wear protective clothing and self-contained breathing apparatus to protect against potential toxic and irritating fumes. Cool exposed containers with water spray. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

**Hazardous Combustion Products**

carbon dioxide, carbon monoxide, oxides of nitrogen, and unidentified compounds.

**Advice for Fire Fighters**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Closed container may forcibly rupture under extreme heat. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. Toxic gases/fumes may be given off during burning or thermal decomposition.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****Personal Precautions, Protective Equipment, and Emergency Procedures**

Wear appropriate personal protective equipment. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

**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).

**Containment/Clean-up Measures**

Cleanup personnel must use appropriate personal protective equipment. Evacuate and keep unnecessary personnel out of spill area. Remove all sources of ignition, including flames, heat, and sparks. Stop leak if without risk. Move containers from spill area. Dike or dam spilled material with non-combustible, absorbent material (e.g., sand, earth, vermiculite, or diatomaceous earth) and control further spillage, where possible. Collect and place spilled material in container for proper disposal according to appropriate local, state and federal regulations. Do not allow spilled material or wash water to enter sewers, surface waters or groundwater systems. Use grounded or non-sparking tools and equipment. Wash spill area with soap and water. Dispose any waste according to appropriate local, state, and federal regulations.

**SECTION 7: HANDLING AND STORAGE****Handling**

Do not breathe vapors or spray mist. Avoid contact with eyes or skin. Avoid contact with clothing. Use only with adequate ventilation and personal protection. Remove contaminated personal protective equipment (PPE), then wash hands and face thoroughly after handling and before eating and drinking. Keep container closed when not in use. Empty containers retain product residue and can be hazardous. Do not get in eyes, on skin or on clothing. Do not ingest. Avoid release to the environment.

**Storage**

Storage period is 6 months after delivery by Pflaumer. Maximum storage temperature is 30°C (86°F). Keep away from food products during use and storage. 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. Personnel education and training in the safe use and handling of this product are required under OSHA Hazard Communication Standard 29 CFR 1910.1200.

**Incompatible Materials or Ignition Sources**

Hazardous polymerization does not occur. Avoid strong oxidizing agents, acids, isocyanates.

**SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION****Special Note for Exposure Control**

Consult local authorities for further acceptable exposure limits.

Chemical Name	Result	ACGIH/OSHA
Aspartic Acid, N, N'-[methylenebis(2-methyl-4,1-cyclohexanediyl)]bis-,1,1',4,4''-tetraethyl ester (CAS 136210-32-7)	STELs	None established.
	TWAs	None established.
	PEL	None established.

**Engineering Measures/Controls**

General dilution and local exhaust as necessary to control airborne vapors, mists, dusts, and thermal decomposition products below appropriate airborne concentration standards and guidelines.

**Environmental Exposure Controls**

Avoid release to the environment. Construct a dike to prevent spreading of spills.

**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.

**General Industrial Hygiene Considerations**

Keep away from food and drink. Wash hands and face after use. Educate and train workers in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

**Personal Protective Equipment****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. Use positive pressure supplied air respirator when airborne concentrations are not known, when airborne solvent levels are 10 times the appropriate TLV, and when spraying is performed or product is applied by aerosol in a confined space or area with limited ventilation. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Contact health and safety professional or manufacturer for specific information.

**Eye/Face**

Use chemical resistant goggles. Chemical safety goggles in combination with a full face shield must be used if a splash hazard exists.

**Hands**

Use permeation resistant gloves such as butyl rubber, nitrile rubber, or neoprene.

**Skin/Body**

Wear rubber or plastic apron and permeation resistant clothing, chemical-resistant gloves, and long-sleeved shirts, and pants. Remove and wash contaminated clothing before re-use.

**Key to Abbreviations**

ACGIH = American Conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

MSHA = Mine Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day 40hr/week exposures

STEL = Short Term Exposure Limits are based on 15-minute exposures

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Liquid, black
<b>Odor</b>	Slight inherent odor
<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available
<b>Melting Point</b>	No data available
<b>Freezing Point</b>	No data available
<b>Boiling Point</b>	>200°C
<b>Flash Point</b>	74°C ca
<b>Evaporation Rate</b>	No data available
<b>Flammability</b>	No data available
<b>Upper/Lower Flammability or Explosive Limits</b>	No data available
<b>Auto-ignition Temperature</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Relative Density</b>	No data available
<b>Specific Gravity</b>	No data available
<b>Solubility(ies)</b>	Insoluble
<b>Partition Coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>VOC (Volatile Organic Compounds)</b>	<100 g/L

**SECTION 10: STABILITY AND REACTIVITY****Chemical Stability**

Stable

**Possibility of Hazardous Reactions**

Hazardous polymerization will not occur.

**Conditions to Avoid**

Extreme heat.

**Incompatible Materials**

Strong oxidizing agents, acids, and isocyanates.

**Hazardous Decomposition Products**

Carbon dioxide, carbon monoxide, oxides of nitrogen, other undetermined compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION****ACUTE TOXICITY**

LD50 Oral Rat >2,000 mg/kg

LC50 Inhalation Rat >4,224 mg/l, 4h

LD50 Dermal Rat >2,000 mg/kg

**IMMEDIATE (ACUTE) EFFECTS**

Skin Corrosion/Irritation (Rabbit, 24h): None

Skin Sensitization (Guinea Pig): Positive

Carcinogenicity: OSHA Not Listed. IARC Not Listed. NTP Not Listed.

**SECTION 12: ECOLOGICAL INFORMATION****Toxicity**

Acute Toxicity to Fish: LC50 66 mg/l (Zebra Fish, 96h), LC50 88.6 mg/l (Water Flea, 96h); Acute Toxicity to algae: ErC50 113 mg/l.

**Persistence and Degradability**

Not readily degradable.

**Bioaccumulative Potential**

Bioaccumulation ca. 8,228 BCF.

**Other Adverse Effects**

Toxicity to terrestrial Plants: EC50  $\geq$ 100 mg/kg, 14d)

**Other Information**

Toxicity to Microorganisms: EC 50: 3,110 mg/l (bacteria, 3 h).

**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**

**[IF the product is DOT regulated, add the Signal Word & the proper DOT symbol here]**

	UN Number	UN Proper Shipping Name	Transport Hazard Class(es)	Packing Group	Environmental Hazards

<b>DOT</b>	Not regulated	Not regulated	Not regulated	Not regulated	H412 Harmful to aquatic life with long-lasting effects.
<b>IMO/IMDG</b>	Not regulated	Not regulated	Not regulated	Not regulated	H412 Harmful to aquatic life with long-lasting effects.
<b>IATA/CAO</b>	Not regulated	Not regulated	Not regulated	Not regulated	H412 Harmful to aquatic life with long-lasting effects.

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

## SECTION 15: REGULATORY INFORMATION

### Safety and Environmental Regulations/ Legislation Specific for the Substance or Mixture

#### SARA Hazard Classifications

#### STATE RIGHT TO KNOW

COMPONENT	CAS	MA	NJ	PA
Aspartic Acid, N, N'-[methylenebis(2-methyl-4,1-cyclohexanediy)]bis-,1,1',4,4"-tetraethyl ester	136210-32-7	136210-32-7	136210-32-7	136210-32-7

#### INVENTORY

COMPONENT	CAS	INVENTORIES
Aspartic Acid, N, N'-[methylenebis(2-methyl-4,1-cyclohexanediy)]bis-,1,1',4,4"-tetraethyl ester	136210-32-7	TSCA, DSL, EINECS/ELINCS, AICS, TECSC, HSNO, NCSR, KECI

#### United States

##### Environment

U.S. – CERCLA/SARA – Hazardous Substances and their Reportable Quantities: None.

U.S. – SARA – Section 311/312 Hazard Categories: None.

U.S. – CERCLA/SARA – Section 302 Extremely Hazardous Substances TPQs: None

U.S. – CERCLA/SARA – Section 313 – Emissions Reporting: None

U.S. – CERCLA/SARA – Section 313 – PBT Chemical Listing: None

#### United States – California

##### Environment

U.S. – California – Proposition 65 – Carcinogens List: None

U.S. – California – Proposition 65 – Developmental Toxicity: None

U.S. – California – Proposition 65 – Maximum Allowable Dose Levels (MADL): None

U.S. – California – Proposition 65 – No Significant Risk Levels (NSRL): None

U.S. – California – Proposition 65 – Reproductive Toxicity – Female: None

U.S. – California – Proposition 65 – Reproductive Toxicity – Male: None

## SECTION 16: OTHER INFORMATION

### Full text of Hazardous “H” Warnings:

H302 Harmful if swallowed.

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.  
H412 Harmful to aquatic life with long-lasting effects.

**Full text of "R" Phrases:**

R22 Harmful if swallowed.  
R37/38 Irritating to respiratory system and skin.  
R41 Risk of serious damage to eyes.  
R43 May cause sensitization by skin contact.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Personal Protection:** protective clothing, impervious gloves, safety goggles, OSHA/NIOSH-approved respirator

**Prepared by** Kretus Inc.

**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.