SDS: 0018153
Date Prepared: 04/26/2021

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name:	**EBECRYL® 113 radiation curing resins**
Synonyms:	None
Product Description:	Acrylate ester
Molecular Weight:	Not available
Intended/Recommended Use:	Coatings

Allnex USA Inc., 9005 Westside Parkway, Alpharetta, Georgia 30009, USA
For Product and all Non-Emergency Information call your local Allnex contact point or contact us at http://www.allnex.com/contact

EMERGENCY PHONE (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call:
+1-866-928-0789 (toll free) or +1-215-207-0061 (Carechem 24 - Allnex29003-NCEC)
See Section 16 for Emergency phone numbers for other regions.

2. HAZARDS IDENTIFICATION

GHS Classification
Aquatic Environment Acute Hazard Category 2
Aquatic Environment Chronic Hazard Category 2

LABEL ELEMENTS

Hazard Statements
Toxic to aquatic life
Toxic to aquatic life with long lasting effects

Precautionary Statements
Avoid release to the environment.
Dispose of contents/container in accordance with local and national regulations.

Hazards Not Otherwise Classified (HNOC), Other Hazards
Polymerization may occur from excessive heat, contamination or exposure to direct sunlight.

3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS

Component / CAS No.	%	GHS Classification
2-propenoic acid, reaction products with glycidyl tert-decanoate 94624-09-6	~99.9	Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)

Additional GHS classification or other information may be included in this section but has not been adopted by OSHA. See Section 16 for full text of H phrases.

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4. FIRST AID MEASURES

First-aid Measures

Inhalation:
Material is not expected to be harmful if inhaled. Remove to fresh air.

Skin Contact:
Wash immediately with plenty of water and soap.

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

Ingestion:
Material is not expected to be harmful by ingestion. No specific first aid measures are required.

Most Important Symptoms and Effects, Acute and Delayed
None known.

Immediate Medical Attention and Special Treatment
In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Notes To Physician:
No specific measures have been identified.

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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:
Use water spray or fog, carbon dioxide or dry chemical.

Unsuitable Extinguishing Media:
full water jet.

Protective Equipment:
Firefighters, and others exposed, wear self-contained breathing apparatus.

Special Hazards:
Keep containers cool by spraying with water if exposed to fire.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
Refer to Section 8 (Exposure Controls/Personal Protection) for appropriate personal protective equipment.

Methods For Cleaning Up:
Cover spills with some inert absorbent. Sweep up into containers for disposal. Flush spill area with water.

Environmental Precautions:
Avoid release to the environment.

References to other sections:
See Sections 7, 8 and 13 for additional information.

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7. HANDLING AND STORAGE

HANDLING

Precautions: Wash hands thoroughly after handling. Avoid release to the environment.

Special Handling Statements: Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid excessive heat, contamination or exposure to direct sunlight to prevent polymerization.

STORAGE
Store in a cool, dry, well ventilated place and keep container tightly closed. Keep away from heat sources and direct sunlight.

Storage Temperature: Room temperature
Reason: Quality.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:
Engineering controls are not usually necessary if good hygiene practices are followed.

Respiratory Protection:
For operations where inhalation exposure can occur use an approved respirator. Recommendations are listed below. Other protective respiratory equipment may be used based on user's own risk assessment.
Recommended respirators include those certified by NIOSH.

Recommended:
Full Face Mask with organic vapor cartridge, Type A filter (BP >65°C)

Eye Protection:
Wear eye/face protection.

Skin Protection:
Avoid skin contact. Wear impermeable gloves.

Hand Protection:
Wear protective gloves. Recommendations are listed below. Other protective materials may be used based on user's own risk assessment. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred. Replace gloves immediately when torn or any change in appearance (dimension, color, flexibility etc.) is noticed.

Gloves for repeated or prolonged exposure - non exhaustive list:
Nitrile rubber (NBR), thickness: > 0.56 mm, break through time: up to 480 min

Gloves for short term exposure/splash protection - non exhaustive list:
Nitrile rubber (NBR), thickness: 0.1 mm, break through time: up to 30 min

The chemical resistance depends on the type of product and amount of product on the glove. Therefore gloves need to be changed when in contact with chemicals.

Not suitable gloves - non exhaustive list:
Latex gloves

Due to many conditions (e.g. temperature, abrasion) the practical usage of a chemical protective glove in practice may be much shorter than the permeation time determined through testing.

Additional Advice:
Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.

Exposure Limit(s)

No values have been established.

Biological Exposure Limit(s)

No values have been established.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	grayish-green
Appearance:	clear liquid
Odor:	ester
Boiling Point:	> 100 °C 212 °F
Melting Point:	Not applicable
Vapor Pressure:	1.00 * 10-02 Pa @ 20 °C OECD TG 104
Specific Gravity/Density:	1.01 g/cm³
Vapor Density:	Not available
Percent Volatile (% by wt.):	< 0.5
pH:	Not applicable
Saturation In Air (% By Vol.):	Not available
Evaporation Rate:	Not available
Solubility In Water:	142 mg/l @ 20 °C
Volatile Organic Content:	Not available
Flash Point:	> 100 °C 212 °F Setaflash Closed Cup
Flammable Limits (% By Vol):	Not applicable
Autoignition Temperature:	Not applicable
Decomposition Temperature:	Not available
Partition coefficient (n-octanol/water):	4.118 - 4.190 OECD 117
Odor Threshold:	Not available
Viscosity (Kinematic):	90 - 150 mPa.s @ 25 °C
Viscosity (Dynamic):	Not available
Flammability:	Not available
Oxidizing Properties:	No

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10. STABILITY AND REACTIVITY

Reactivity: No information available

Stability: Stable.

Conditions To Avoid: Keep away from heat, spark and flame. Avoid exposure to excessive heat, UV

	light. Containers filled with this product should be kept closed when not in use. Avoid exposure to direct sunlight.
Polymerization:	May occur
Conditions To Avoid:	Uncontrolled polymerization may cause rapid evolution of heat and increase in pressure that could result in violent rupture of sealed storage vessels or containers Hazardous polymerization can occur when exposed to direct sunlight. Hazardous exothermic polymerization can occur when heated. Avoid contact with sunlight or ultraviolet light. Avoid excessive heat. Avoid temperatures above 60 C (140 F).
Materials To Avoid:	Peroxides, free radical initiators, strong alkalies. reactive metals
Hazardous Decomposition Products:	oxides of carbon smoke hydrocarbons soot

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Skin, Eyes, Oral.

Acute toxicity - oral: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.
Acute toxicity - dermal: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.
Acute toxicity - inhalation: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.

Skin corrosion / irritation: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.
Serious eye damage / eye irritation: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.

Respiratory sensitization: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.
Skin sensitization: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.

Carcinogenicity: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.
Germ cell mutagenicity: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.
Reproductive toxicity: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure: Not Classified. **-** Based on available data and/or professional judgment, the classification criteria are not met.
Specific target organ toxicity (STOT) - repeated exposure: Not Classified. **-** Based on available data and/or professional judgment, the classification criteria are not met.

Aspiration hazard: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.

PRODUCT TOXICITY INFORMATION

ACUTE TOXICITY DATA

oral	rat	Acute LD50	> 5000	mg/kg
dermal	rabbit	Acute LD50	> 2000	mg/kg
inhalation	rat	Acute LC50 4 hr	No data	

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	rabbit	Not irritating
Acute Irritation	eye	rabbit	Not irritating

ALLERGIC SENSITIZATION

Local Lymph Node Assay	dermal	mouse	Not sensitizing
Sensitization	respiratory	No data	

SUBACUTE/SUBCHRONIC TOXICITY

oral (gavage)	rat	Combined 28-Day Repeated Dose Study With The Reproduction/Developmental Toxicity Screen	100 (males) and 1000 (females) mg/kg NOAEL	NOAEL

GENOTOXICITY

Assays for Gene Mutations

Bacterial Reverse Mutation +/-S9	Salmonella Typhimurium	Negative
In Vitro Mammalian Cell Gene Mutation Assay (HGPRT)	V79, genetic marker HPRT	Not mutagenic

Assays for Chromosomal Aberrations

In Vitro Micronucleus Assay	Human Lymphocyte	Mixed results

REPRODUCTIVE TOXICITY

oral (gavage)	rat	Combined 28-Day Repeated Dose Study With The Reproduction/Developmental Toxicity Screen	Not teratogenic

OTHER INFORMATION

The toxicity data above are the results from Allnex sponsored studies or from the available public literature.

HAZARDOUS INGREDIENT TOXICITY DATA

Cardura acrylate has an acute oral (rat) and dermal (estimated) LD50 value of > 5000 and > 2000 mg/kg, respectively. Animal testing has not revealed a strong irritation potential for skin or eyes. No sensitization was observed in a local lymph node assay in mice, but allergic reactions cannot be excluded, especially for persons already sensitized to other acrylated substances. A 28-days repeated dose toxicity study via the oral route in rats revealed some adverse effects on stomach and kidneys. The reproductive parameters were not affected and developmental toxicity was not observed. Gene mutations assays were negative (AMES, HPRT), and an equivocal result was observed in an in vitro micronucleus assay. Carcinogenicity was not investigated so far.

12. ECOLOGICAL INFORMATION

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

Overall Environmental Toxicity: Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

ALGAE TEST RESULTS

Test: Growth Inhibition (OECD 201)
Duration: 72 hr
Species: Green Algae (Desmodesmus subspicatus)
8.3 mg/l EC50 Measured Concentration

FISH TEST RESULTS

Test: Acute toxicity, freshwater (OECD 203)
Duration: 96 hr. **Procedure:** Semi-static.
Species: Zebra Fish (Brachydanio rerio)
1.3 mg/l LC50 Measured Concentration

INVERTEBRATE TEST RESULTS

Test: Acute Immobilization (OECD 202)
Duration: 48 hr **Procedure:** Static
Species: Water Flea (Daphnia magna)
17 mg/l EC50 Measured Concentration

BACTERIA TEST RESULTS

Test: Respiration Inhibition (OECD 209)
Duration: 3 hr
Species: Activated Sludge - Bacterial
1500 mg/l EC50

DEGRADATION

Test: CO2 Evolution: Modified Sturm (OECD 301B)
Duration: 28 day **Procedure:** Ready biodegradability
36 % This material is not readily biodegradable. 10 Day Window %: 27

RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Fish
2-propenoic acid, reaction products with glycidyl tert-decanoate	LC50 = 1.3 mg/l - Danio rerio (96 hrs)

(94624-09-6)	

Component / CAS No.	Toxicity to Water Flea
2-propenoic acid, reaction products with glycidyl tert-decanoate (94624-09-6)	EC50 = 8.3 mg/l - Daphnia magna (48 hrs)

Component / CAS No.	Toxicity to Algae
2-propenoic acid, reaction products with glycidyl tert-decanoate (94624-09-6)	EC50 = 11 mg/L (measured conc.) - Desmodesmus subspicatus (72h)

Component / CAS No.	Partition coefficient
2-propenoic acid, reaction products with glycidyl tert-decanoate (94624-09-6)	Not available

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13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this SDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this SDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 3 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. The Company encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. The Company recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. The Company has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

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14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

US DOT

Dangerous Goods? X

PROPER SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class: 9
Packing Group: III
UN/ID Number: UN3082
Transport Label Required: Miscellaneous
Marine Pollutant
Marine Pollutant
TECHNICAL NAME (N.O.S.): CARDURA ACRYLATE

Comments: Marine Pollutants - DOT requirements specific to Marine Pollutants do not apply to

non-bulk packagings transported by motor vehicles, rail cars or aircraft.

TRANSPORT CANADA

Dangerous Goods? X
PROPER SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class: 9
Packing Group: III
UN Number: UN3082
Transport Label Required: Miscellaneous
Marine Pollutant
Marine Pollutant
TECHNICAL NAME (N.O.S.): CARDURA ACRYLATE

ICAO / IATA

Dangerous Goods? X
UN PROPER SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport Hazard Class: 9
Packing Group: III
UN Number: UN3082
Transport Label Required: Miscellaneous
TECHNICAL NAME (N.O.S.): CARDURA ACRYLATE

IMO

Dangerous Goods? X
UN PROPER SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport Hazard Class: 9
UN Number: UN3082
Packing Group: III
Transport Label Required: Miscellaneous
Marine Pollutant
Marine Pollutant
TECHNICAL NAME (N.O.S.): CARDURA ACRYLATE

SPECIAL PRECAUTIONS FOR USER
Protect against external heat sources higher than +40°C/104°F.

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15. REGULATORY INFORMATION

Inventory Information

United States (USA): All components of this product are designated as “Active” on the TSCA Inventory or are not required to be listed.

Canada: One or more components of this product are NOT included on the Canadian Domestic Substances List (DSL).

European Economic Area (including EU): When purchased and shipped from an Allnex legal entity based in the EEA (EU or Norway), this product is compliant with the registration of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt and/or registered.

Australia: One or more components of this product have NOT yet been included in the Australian Inventory of

Industrial Chemicals (AIIC) or assessed by AICIS.

New Zealand: This product is NOT approved under the Hazardous Substances and New Organisms (HSNO) Act.

China: One or more components of this product are NOT included on the Chinese (IECSC) inventory. The company has obtained the required notification approvals from the Ministry of Environmental Protection (MEP) as per the "Environmental Administrative Measures for New Chemical Substance" for the component(s) not listed in the Chinese Inventory (IECSC). The product can be imported/manufactured in China ONLY under specific conditions.

Japan: One or more components of this product are NOT included on the Japanese (ENCS and/or ISHL) inventories.

Korea: One or more components of this product are NOT included on the Korean (ECL) inventory.

Philippines: One or more components of this product are NOT included on the Philippine (PICCS) inventory.

Taiwan: All components of this product are included in the Taiwan chemical substance inventory or are not required to be listed on the Taiwan chemical substance inventory (TCSI).

Switzerland: All components of this product are exempt from the new substance notification requirements for Switzerland (SR 813.11 art. 24-26).

OTHER ENVIRONMENTAL INFORMATION
The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

This product does not contain any components regulated under these sections of the EPA

PRODUCT HAZARD CATEGORY UNDER SECTIONS 311 AND 312 OF EPCRA

Physical Hazards
Not applicable

Health Hazards
Not applicable

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16. OTHER INFORMATION

NFPA Hazard Rating (National Fire Protection Association)
Health: 0 - Materials that under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

Fire: 1 - Materials that must be preheated before ignition can occur.

Instability: 1 - Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures.

Reasons for Issue: Revised Section 1

Date Prepared: 04/26/2021
Date of last significant revision: 04/26/2021

Component - Hazard Statements
2-propenoic acid, reaction products with glycidyl tert-decanoate
H401 - Toxic to aquatic life.
H411 - Toxic to aquatic life with long lasting effects.

Emergency phone numbers for other regions

Asia Pacific
Australia: +61 1800 022 037 (Allnex Australia)
China (PRC): +86(0)532 8388 9090 (NRCC)
India: 000 800 100 7479 (toll free) or +65 3158 1198 (Carechem 24)
Indonesia: 007 803 011 0293 (Carechem 24)
Japan: +81 345 789 341 (Carechem 24)
Korea: +82 2 3479 8401 (Carechem 24)
Malaysia: +60 3 6207 4347 (Carechem 24)
New Zealand: +64 0800 803 002 (Allnex New Zealand)
Philippines: +63 2 231 2149 (Carechem 24)
Taiwan: +886 2 8793 3212 (Carechem 24)
Vietnam: +84 8 4458 2388 (Carechem 24)
All Others: +65 3158 1074 (Carechem 24)
Europe
+44 (0) 1235 239 670 (Carechem 24)
Middle East, Africa
+44 (0) 1235 239 671 (Carechem 24)
Latin America
Brazil: +55-800-707-7022 (toll free) or +55-11-98149-0850 (Suatrans 24)
Chile: +56 2 2582 9336 (Carechem 24)
Mexico and all others: +52-555-004-8763 (Carechem 24)

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