

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: EBECRYL® 8110 radiation curing resins
Synonyms: None
Product Description: Urethane acrylate in acrylic monomers
Molecular Formula: Mixture
Molecular Weight: Mixture

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:

Asia Pacific:

Australia: +61 2801 44558 (Carechem 24)
China (PRC): +86(0)532-8388-9090 (NRCC)
Japan: +81 345 789 341 (Carechem 24)
New Zealand: +64 9929 1483 (Carechem 24)
All Others: +65 3158 1074 (Carechem 24)

Europe/Africa/Middle East (Carechem 24):

Europe, Middle East, Africa, Israel: +44 (0) 1235 239 670
Middle East, Africa (Arabic speaking countries): +44 (0) 1235 239 671

Latin America (Carechem 24):

Brazil: +55 113 711 9144
Mexico and all others: +52-555-004-8763

Canada and USA (Carechem 24 - Allnex29003-NCEC): +1-866-928-0789 (toll free) or +1-215-207-0061

® indicates trademark registered in the U.S. Outside the U.S., mark may be registered, pending or a trademark. Mark is or may be used under license.

2. HAZARDS IDENTIFICATION

GHS Classification

Skin Corrosion / Irritation Hazard Category 2
Serious Eye Damage / Eye Irritation Hazard Category 1
Skin Sensitizer Hazard Category 1B
Aquatic Environment Acute Hazard Category 2
Aquatic Environment Chronic Hazard Category 2

LABEL ELEMENTS



Signal Word

Danger

Hazard Statements

Causes skin irritation
 Causes serious eye damage
 May cause an allergic skin reaction
 Toxic to aquatic life
 Toxic to aquatic life with long lasting effects

Precautionary Statements

Wash face, hands and any exposed skin thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Avoid breathing dust/fume/gas/mist/vapours/spray.
 Contaminated work clothing should not be allowed out of the workplace.
 Avoid release to the environment.
 IF ON SKIN: Wash with plenty of soap and water.
 Specific treatment (see supplemental first aid instructions on this label).
 Take off all contaminated clothing and wash it before reuse.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
 Continue rinsing.
 Immediately call a POISON CENTER or doctor/physician.
 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	Carcinogen
Trimethylolpropane triacrylate 15625-89-5	18 - 28	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) Skin Sens. 1B (H317)	-
neopentylglycol propoxylate diacrylate 84170-74-1	15 - <25	Skin Sens. 1B (H317) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	-
Acrylated resin -	30 - 40	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319)	-
Acrylated esters -	15 - < 25	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1B (H317) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	-

The specific chemical identity and/or exact percentage of composition for one or more ingredients has been withheld as a trade secret.

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.

4. FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

Eye Contact:

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical attention immediately.

Skin Contact:

Wash immediately with plenty of water and soap. Remove contaminated clothing and shoes without delay. Obtain medical attention. Do not reuse contaminated clothing without laundering. Destroy or thoroughly clean shoes before reuse.

Ingestion:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

General Information:

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Use water spray or fog, carbon dioxide or dry chemical.

Extinguishing Media to Avoid:

high pressure water jet.

Protective Equipment:

Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection). Firefighters, and others exposed, wear self-contained breathing apparatus.

Special Hazards:

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

Methods For Cleaning Up:

Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

Environmental Precautions:

Use appropriate containment to avoid environmental contamination. Avoid release to the environment.

References to other sections:

See Sections 8 and 13 for additional information.

7. HANDLING AND STORAGE

HANDLING

Precautions: Avoid release to the environment. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves and eye/face protection.

Special Handling Statements: Provide good ventilation of working area (local exhaust ventilation if necessary).

STORAGE

Store in a cool, dry, well ventilated place and keep container tightly closed. Keep away from heat sources and direct sunlight. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Prevent unauthorised access. Storage in stainless steel, amber glass, amber polyethylene or baked phenolic lined container.

Storage Temperature: Store at 4 - 40 °C 39.2 - 104 °F

Reason: Safety.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:

Utilize a closed system process where feasible. Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure when spraying or curing at elevated temperatures.

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:

Provide eye wash fountain and safety shower in close proximity to points of potential exposure. Wear eye/face protection such as chemical splash proof goggles or face shield. Prevent eye and skin contact.

Skin Protection:

Prevent contamination of skin or clothing when removing protective equipment. Barrier creams may be used in conjunction with the gloves to provide additional skin protection. Wear impermeable gloves and suitable protective clothing.

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 short term exposure/splash protection - non exhaustive list:

Laminated multilayer gloves, break through time: > 60 min

Nitrile rubber (NBR), thickness: > 0.56 mm, break through time: < 60 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. Use PE gloves as under gloves for difficult situations like for instance: high exposure, unknown composition or unknown properties of the chemicals.

Additional Advice:

Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use.

Exposure Limit(s)

No values have been established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	clear to slightly hazy
Appearance:	Clear to slightly hazy liquid.
Odor:	-
Boiling Point:	> 100 °C 212 °F -
Melting Point:	Not applicable
Vapor Pressure:	Not available
Specific Gravity/Density:	~ 1.16 g/cm ³
Vapor Density:	Not available
Percent Volatile (% by wt.):	Not available
pH:	Not available
Saturation In Air (% By Vol.):	Not available
Evaporation Rate:	Not available
Solubility In Water:	Not available
Volatile Organic Content:	Not available
Flash Point:	> 100 °C 212 °F Setflash
Flammable Limits (% By Vol):	Not available
Autoignition Temperature:	Not available
Decomposition Temperature:	Not available
Partition coefficient (n-octanol/water):	Not available
Odor Threshold:	Not available
Viscosity (Kinematic):	Not available

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions To Avoid:	Avoid contamination with metallic impurities and peroxides. Avoid direct exposure to sunlight. Elevated temperatures, all sources of ignition. All sources of ignition.
Polymerization:	May occur
Conditions To Avoid:	Hazardous polymerization can occur when exposed to direct sunlight. Hazardous exothermic polymerization can occur when heated. Uncontrolled polymerization may cause evolution of heat and increase in pressure that could result in the rupture of sealed containers.

Materials To Avoid: Peroxides, metallic compounds, strong oxidizing agents.
Strong oxidizing agents.
Protect from light.
They give an exothermic reaction with the product.
Unintentional contact with them should be avoided.

Hazardous Decomposition Products: hydrogen fluoride
oxides of carbon
hydrocarbons

11. TOXICOLOGICAL INFORMATION

PRODUCT TOXICITY INFORMATION

Likely Routes of Exposure: Skin, Eyes, Oral.

ACUTE TOXICITY DATA

oral	rat	Acute LD50	> 2000 mg/kg
dermal	rabbit	Acute LD50	> 2000 mg/kg
inhalation	rat	Acute LC50 4 hr	> 5 mg/l (Dust/Mist)

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	rabbit	Irritating
Acute Irritation	eye	rabbit	Causes serious damage

ALLERGIC SENSITIZATION

Sensitization	dermal	Sensitizing
Sensitization	respiratory	No data

GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay	No data
-----------------------	---------

SPECIFIC TARGET ORGAN TOXICITY

Specific target organ toxicity (single exposure):	No data
Specific target organ toxicity (repeated exposure):	No data

OTHER INFORMATION

The toxicological properties of this material have not been fully determined.

Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms such as redness, blistering, dermatitis, etc.

The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.

The product toxicity information above has been estimated.

HAZARDOUS INGREDIENT TOXICITY DATA

Trimethylolpropane triacrylate has acute oral (rat) LD50 and acute dermal (rabbit) LD50 values of 5760 mg/kg and 7050 mg/kg, respectively. Direct contact with this material may cause moderate eye and skin irritation. Repeated or prolonged skin contact may cause allergic skin reactions. Results of in vitro mutagenicity testing for trimethylolpropane triacrylate are mixed with both positive and negative findings. Trimethylolpropane triacrylate may cause mutagenic effects based on in vitro studies. However, a more definitive in vivo study indicates trimethylolpropane triacrylate is not mutagenic (non-genotoxic). Additionally, in a long-term bioassay in which trimethylolpropane triacrylate was applied dermally to mice, trimethylolpropane triacrylate was determined to be non-carcinogenic. Therefore, the weight of the evidence of various genotoxicity (mutagenicity) test results leads to the conclusion that trimethylolpropane triacrylate is not mutagenic.

Neopentylglycol propoxylate diacrylate has acute oral (rat) LD50, acute dermal (rabbit) LD50 and 4-hour inhalation (rat) LC50 values of > 5000 mg/kg, > 2000 mg/kg and > 2 mg/l, respectively. Sensitization upon dermal contact has been seen in animal studies. There is no experimental evidence for genotoxicity in vitro. There is no experimental evidence of carcinogenic effect.

Acrylated resin - The toxicological properties of this material have not been fully evaluated. Contact may cause moderate eye and skin irritation.

Acrylated esters has acute oral (rat) and dermal (rabbit) LD50 values of 540-1350 mg/kg and 4600 mg/kg, respectively. This material may cause moderate skin irritation and severe eye irritation. Acrylated esters may cause skin sensitization. This material was not mutagenic in the Ames Salmonella Assay and not mutagenic in the mammalian forward gene mutation test (HPRT). The outcome for chromosomal damage in the mouse Micronucleus Assay was also negative. A prenatal study in rabbits has not shown any adverse effects with regard to developmental toxicity. Carcinogenicity has not been investigated.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause birth defects or other reproductive harm.

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.

The ecological assessment for this material is based on an evaluation of its components.

RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Algae	Toxicity to Fish	Toxicity to Water Flea
Trimethylolpropane triacrylate 15625-89-5	Not available	Not available	Not available
neopentylglycol propoxylate diacrylate 84170-74-1	EC50 = 3.4mg/l - Pseudokirchneriella subcapitata (72hrs) NOEC = 1mg/l - Pseudokirchneriella subcapitata (72hrs)	LC50 = 2.7 mg/l - Zebra Fish (Brachydaniorerio) (96h)	EC50 = 37 mg/l - Daphnia magna (48h) NOEC = 25.3mg/l - Daphnia magna (48h)
Acrylated resin -	Not available	Not available	Not available
Acrylated esters -	Not available	Not available	Not available

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 MSDS 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 MSDS (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.

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.): ACRYLATED ESTERS, NEOPENTYLGLYCOL PROPOXYLATE DIACRYLATE

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.): ACRYLATED ESTERS, NEOPENTYLGLYCOL PROPOXYLATE DIACRYLATE

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.): ACRYLATED ESTERS, NEOPENTYLGLYCOL PROPOXYLATE DIACRYLATE

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.): ACRYLATED ESTERS, NEOPENTYLGLYCOL PROPOXYLATE DIACRYLATE

15. REGULATORY INFORMATION

Inventory Information

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

This product contains a substance that is manufactured under a Low Volume Exemption (40 CFR 723.50) and is restricted in use for coating resins.

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 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, pre-registered and/or registered.

Australia: One or more components of this product have NOT yet been included in the Australian Inventory of Chemical Substances (AICS) or assessed by NICNAS.

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: One or more components of this product are NOT included in 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. 16-17).

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 CLASSIFICATION UNDER SECTION 311 OF SARA

- Acute
- Reactivity

16. OTHER INFORMATION**NFPA Hazard Rating (National Fire Protection Association)**

Health: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

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: New Format

Date Prepared: 09/22/2015

Date of last significant revision: 02/14/2012

Component Hazard Phrases

Trimethylolpropane triacrylate

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

neopentylglycol propoxylate diacrylate

H317 - May cause an allergic skin reaction.

H401 - Toxic to aquatic life.

H411 - Toxic to aquatic life with long lasting effects.

Acrylated resin

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

Acrylated esters

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H317 - May cause an allergic skin reaction.

H401 - Toxic to aquatic life.

H411 - Toxic to aquatic life with long lasting effects.

Prepared By: Product Stewardship & Regulatory Affairs Department, <http://www.allnex.com/contact>

This information is given without any warranty or representation. We do not assume any legal responsibility for same, nor do we give permission, inducement, or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation, and verification. Before using any product, read its label.
