SDS: 0057879
Date Prepared: 04/23/2014

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name:	**EBECRYL® 4100 radiation curing resins**
Synonyms:	None
Chemical Family:	unsaturated urethane acrylate
Molecular Weight:	Not available
Intended/Recommended Use:	Binder

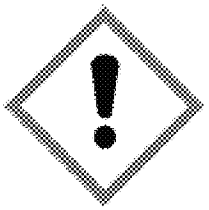
Allnex USA Inc., 9005 Westside Parkway, Alpharetta, Georgia 30009, USA
For Product and all Non-Emergency Information call your local Allnex contact point or contact us at http://www.allnex.com/contact

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

2. HAZARDS IDENTIFICATION

GHS Classification
Serious Eye Damage / Eye Irritation Hazard Category 2A
Aquatic Environment Acute Hazard Category 3
Aquatic Environment Chronic Hazard Category 3

LABEL ELEMENTS



Signal Word
Warning

Hazard Statements
Causes serious eye irritation
Harmful 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 release to the environment.
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.
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
Acrylic Resin -	~ 100	Eye Irrit. 2A (H319) Aquatic Acute 3 (H402) Aquatic Chronic 3 (H412)	-

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 advice if there are persistent symptoms.

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

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

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

Not applicable

5. FIRE-FIGHTING MEASURES

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

Extinguishing Media to Avoid:
full water jet, high pressure water jet.

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

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.

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

7. HANDLING AND STORAGE

HANDLING

Precautions: Wash hands thoroughly after handling. Wear eye/face protection. Avoid release to the environment.

Special Handling Statements: None

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:
Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

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 such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure.

Skin Protection:
Avoid skin contact. 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 repeated or prolonged exposure:
Nitrile rubber (NBR), thickness: > 0.56 mm, break through time: up to 480 min

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

Exposure Limit(s)

No values have been established.

---

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	yellowish
Appearance:	liquid
Odor:	low
Boiling Point:	Not available
Melting Point:	Not available
Vapor Pressure:	< 110 hPa @ 50 °C
Specific Gravity/Density:	1.13 g/cm³ @ 20 °C
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:	@ 15 °C immiscible
Volatile Organic Content:	Not available
Flash Point:	> 100 °C 212 °F DIN EN ISO 2719
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 applicable

10. STABILITY AND REACTIVITY

Stability: Stable

Conditions To Avoid: Avoid direct exposure to sunlight. Avoid temperatures above 60°C (140°F). Avoid friction with temperature increase as result. Avoid exposure to strong UV sources. Avoid direct contact with heat sources.

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 bases or amines. Avoid contact with strong oxidizing agents. Avoid contact with free radical initiators.

Materials To Avoid: Avoid contact with peroxides.
Copper, copper alloys, carbon steel, iron and rust.
Avoid free radical producing initiators.
Contact with alkalis.
They give an exothermic reaction with the product.
Unintentional contact with them should be avoided.
Avoid contact with active metals.

Hazardous Decomposition Products: No hazardous decomposition products if stored and handled as prescribed.

11. TOXICOLOGICAL INFORMATION

PRODUCT TOXICITY INFORMATION

Likely Routes of Exposure: Eyes, Skin, Oral.

ACUTE TOXICITY DATA

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

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	rabbit	Not irritating
Acute Irritation	eye	rabbit	Irritating

ALLERGIC SENSITIZATION

Sensitization	skin	guinea pig	Not sensitizing
Sensitization	respiratory	No data	

GENOTOXICITY

Assays for Gene Mutations
Ames Salmonella Assay Not mutagenic, Based on similar product

HAZARDOUS INGREDIENT TOXICITY DATA

The acrylic resin has an acute oral LD50 (rat) of > 2000 mg/kg. Direct contact causes moderate eye irritation (rabbits). The acrylic resin is not irritating to the skin (rabbits) and did not show a sensitizing effect on guinea-pig. Based on toxicological studies of a similar substance the acrylic resin was not mutagenic in the Ames test.

---

12. ECOLOGICAL INFORMATION

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

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

ECOTOXICITY

ALGAE TEST RESULTS

Test: Growth Inhibition (OECD 201)
Duration: 72 hr
Species: Green Algae (Scenedesmus subspicatus)
53.7 mg/l IC50

FISH TEST RESULTS

Test: Acute toxicity, freshwater (OECD 203)
Duration: 96 hr.
Species: Zebra Fish (Brachydanio rerio)
100 mg/l LC50

INVERTEBRATE TEST RESULTS

Test: Acute Immobilization (OECD 202)
Duration: 48 hr
Species: Water Flea (Daphnia magna)
No toxicity was observed

BACTERIA TEST RESULTS

Test: Respiration Inhibition (OECD 209)
Species: Activated Sludge - Bacterial
>= 10.000 mg/l EC50

PERSISTENCE AND DEGRADABILITY

DEGRADATION

Test: Biodegradability Closed Bottle (OECD 301D)
Duration: 28 day
9 % This material is not readily biodegradable.

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
Acrylic Resin -	IC50 = 53.7 mg/l - Green Algae (Scenedesmus subspicatus) (72h)	LC50 = 100 mg/l - Zebra Fish (Brachydanio rerio) (96h)	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? Not applicable/Not regulated

TRANSPORT CANADA

Dangerous Goods? Not applicable/Not regulated

ICAO / IATA

Dangerous Goods? Not applicable/Not regulated

IMO

Dangerous Goods? Not applicable/Not regulated

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.

Canada: All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the 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: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: All components of this product are included on the Japanese (ENCS and ISHL) inventories or are not required to be listed on the Japanese inventories.

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

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: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual 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 Product

Date Prepared: 04/23/2014
Date of last significant revision: 04/23/2014

Acrylic Resin

H319 - Causes serious eye irritation.
H402 - Harmful to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.

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