



SDS: 0057900
Date Prepared: 12/27/2016

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: EBECRYL® 4765 radiation curing resins
Synonyms: None
Product Description: Urethane acrylate resin containing isocyanate
Molecular Weight: Mixture
Intended/Recommended Use: Hardening agent

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:

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China (PRC): +86(0)532-8388-9090 (NRCC)
Japan: +81 345 789 341 (Carechem 24)
New Zealand: +64 9929 1483 (Carechem 24)
India: 000 800 100 7479 (toll free) or +65 3158 1198 (Carechem 24)
Korea: +82 2 3479 8401 (Carechem 24)
Malaysia: +60 3 6207 4347 (Carechem 24)
Philippines: +63 2 231 2149 (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
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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)

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

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2. HAZARDS IDENTIFICATION

GHS Classification

Flammable Liquids Hazard Category 2
Specific Target Organ Toxicity - Single Exposure Hazard Category 3
Skin Sensitizer Hazard Category 1B

LABEL ELEMENTS



Signal Word
DANGER

Hazard Statements

Highly flammable liquid and vapor
May cause respiratory irritation
May cause an allergic skin reaction

Precautionary Statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/Bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use CO2, dry chemical, or foam for extinction.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
If skin irritation or rash occurs: Get medical advice/attention.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep cool.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
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
Ethyl acetate 141-78-6	~ 45	Flam. Liq. 2 (H225) STOT SE 3 (H336) Skin Irrit. 3 (H316) Eye Irrit. 2B (H320)	-
Aliphatic urethane acrylate -	~ 55	Skin Sens. 1B (H317)	-

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

First-aid Measures

Inhalation:

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

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.

Eye Contact:

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

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.

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.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

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

Unsuitable Extinguishing Media:

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.

Environmental Precautions:

None known

References to other sections:

See Sections 8 and 13 for additional information.

7. HANDLING AND STORAGE

HANDLING

Precautions: Keep away from heat, sparks and open flame. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting and other equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye/face protection. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Use only outdoors or in a well-ventilated area. Avoid breathing vapors or spray mist.

Special Handling Statements: Individuals previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Provide good ventilation of working area (local exhaust ventilation if necessary). During processing and handling of the product, comply with the indicative occupational exposure limit values. Containers must be bonded and grounded when pouring or transferring material. 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. Areas containing this material should have fire safe practices and electrical equipment in accordance with applicable regulations and/or guidelines. Standards are primarily based on the material's flashpoint, but may also take into account properties such as miscibility with water or toxicity. All local and national regulations should be followed.

In the Americas, National Fire Protection Association (NFPA) 30: Flammable and Combustible Liquids Code, is a widely used standard. NFPA 30 establishes storage conditions for the following classes of materials: Class I Flammable Liquids, Flashpoint <37.8 °C. Class II Combustible Liquids, 37.8 °C < Flashpoint <60 °C. Class IIIa Combustible Liquids, 60 °C < Flashpoint < 93 °C. Class IIIb Combustible Liquids, Flashpoint > 93 °C. Keep away from sources of ignition - refrain from smoking. Take precautionary measures against electrostatic loading - earthing necessary during loading operations. Observe the general rules of industrial fire protection.

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

Reason: Quality.

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 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.

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. Barrier creams may be used in conjunction with the gloves to provide additional skin protection.

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.

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.

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)**141-78-6 Ethyl acetate**

OSHA (PEL):	400 ppm (TWA) 1400 mg/m ³ (TWA)
ACGIH (TLV):	400 ppm (TWA)
Other Value:	Not established

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	colorless
Appearance:	liquid
Odor:	solvent
Boiling Point:	~ 80 °C 176 °F
Melting Point:	Not available
Vapor Pressure:	93 hPa @ 20 °C
Specific Gravity/Density:	1.06 g/cm ³ @ 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:	~ -2 °C -35,6 °F @ 1.013 hPa DIN EN ISO 13736
Flammable Limits (% By Vol):	Lower: 2.2 Upper: 11.5 (values for ethyl acetate)
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

Reactivity:	No information available
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: Avoid exposure to strong UV sources. Peroxides, free radical initiators, strong alkalies. Avoid contact with sunlight or ultraviolet light, and heat. Avoid contact with water, polyols and amines. Reacts with water or strong acids generating carbon dioxide, building up pressure in closed containers.

Materials To Avoid: Strong oxidizing agents, acids, and amines.
Avoid acids, bases, strong amines, oxidizing agents and water.

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

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	Not irritating
Acute Irritation	eye	rabbit	Not irritating

ALLERGIC SENSITIZATION

Sensitization	skin	Sensitizing
Sensitization	respiratory	No data

GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay	No data
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SPECIFIC TARGET ORGAN TOXICITY

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

OTHER INFORMATION

The product toxicity information above has been estimated.

HAZARDOUS INGREDIENT TOXICITY DATA

Acute overexposure to ethyl acetate vapor may cause mild eye, nose and throat irritation. The oral (rabbit) LD50 and the dermal (rabbit) LD50 are >2000 mg/kg, respectively. The inhalation LCO (6h) in rats is reported as 22.5 mg/l (vapor). Inhalation overexposure may cause central nervous system effects such as drowsiness and dizziness. Based on available data, this substance is not a skin sensitizer, not mutagenic and not expected to cause adverse reproductive effects. Direct contact with this material may cause mild eye and skin irritation.

The toxicological properties of the aliphatic urethane acrylate have not been fully investigated. The estimated acute oral (rat) and dermal (rabbit) LD50 values are > 2000mg/kg and > 2000 mg/kg, respectively. Direct contact with this material may cause slight eye and skin irritation. Positive results were produced in skin sensitization studies. No pulmonary sensitization was observed in animal tests.

12. ECOLOGICAL INFORMATION

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

This material is not classified as dangerous for the environment.

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

Isocyanate reacts with water at the interface forming CO₂ and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by water soluble solvents. Previous experience shows that polyurea is inert and non-degradable.

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
Ethyl acetate 141-78-6	EC50 = 3300 mg/L - Desmodesmus subspicatus (48h)	LC50 = 484 mg/L - Oncorhynchus mykiss (96h) LC50 220 - 250 mg/L - Pimephales promelas (96h) LC50 352 - 500 mg/L - Oncorhynchus mykiss (96h)	EC50 = 560 mg/L - Daphnia magna (48h)
Aliphatic urethane acrylate -	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: RESIN SOLUTION
 Hazard Class: 3
 Packing Group: II
 UN/ID Number: UN1866
 Transport Label Required: Flammable Liquid

<u>Component / CAS No.</u>	<u>Hazardous Substances/Reportable Quantity of Product (lbs)</u>
Ethyl acetate	11111

Comments: Hazardous Substances/Reportable Quantities - DOT requirements specific to Hazardous Substances only apply if the quantity in one package equals or exceeds the product reportable quantity.

TRANSPORT CANADA

Dangerous Goods? X
 PROPER SHIPPING NAME: RESIN SOLUTION
 Hazard Class: 3
 Packing Group: II
 UN Number: UN1866
 Transport Label Required: Flammable Liquid

ICAO / IATA

Dangerous Goods? X
 UN PROPER SHIPPING NAME: RESIN SOLUTION
 Transport Hazard Class: 3
 Packing Group: II
 UN Number: UN1866
 Transport Label Required: Flammable Liquid

IMO

Dangerous Goods? X

UN PROPER SHIPPING NAME: RESIN SOLUTION

Transport Hazard Class: 3

UN Number: UN1866

Packing Group: II

Transport Label Required: Flammable Liquid

15. REGULATORY INFORMATION**Inventory Information**

United States (USA): One or more components of this product are NOT included on the U.S. Toxic Substances Control Act (TSCA) Inventory. The chemical, physical, and toxicological properties of this material have not been fully investigated. Its handling or use may be hazardous, and it must be used under the supervision of technically qualified individuals. Materials not included on the TSCA Inventory may only be used for research and development (R&D) purposes or in other TSCA exempt activities.

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.

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. 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.

Component / CAS No.	%	TPQ (lbs)	RQ(lbs)	S313	TSCA 12B
Ethyl acetate 141-78-6	~ 45	None	5000	No	No

PRODUCT HAZARD CLASSIFICATION UNDER SECTION 311 OF SARA

- Fire
 - 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: 3 - Liquids and solids that can be ignited under almost all ambient temperature conditions.

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

Reasons For Issue: New Logo

Date Prepared: 12/27/2016

Date of last significant revision: 04/28/2015

Component - Hazard Statements

Ethyl acetate

H225 - Highly flammable liquid and vapor.

H316 - Causes mild skin irritation.

H320 - Causes eye irritation.

H336 - May cause drowsiness or dizziness.

Aliphatic urethane acrylate

H317 - May cause an allergic skin reaction.

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

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