

SDS: 0074651

Date Prepared: 04/19/2023

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: EBECRYL® 1859 RADIATION CURING RESINS

Synonyms: None

Product Description: Acrylated polyether

Molecular Formula: Mixture **Molecular Weight:** Mixture

Intended/Recommended Use: Coatings and Inks

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.

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2. HAZARDS IDENTIFICATION

GHS Classification

Carcinogenicity Hazard Category 2 Skin Corrosion / Irritation Hazard Category 2 Serious Eye Damage / Eye Irritation Hazard Category 2A Aquatic Environment Acute Hazard Category 2 Aquatic Environment Chronic Hazard Category 2

LABEL ELEMENTS



Signal Word WARNING

Hazard Statements

Suspected of causing cancer
Causes skin irritation
Causes serious eye irritation
Toxic to aquatic life
Toxic to aquatic life with long lasting effects

Precautionary Statements

Obtain special instructions before use.

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

Wash face, hands and any exposed skin thoroughly after handling.

Avoid release to the environment.

IF exposed or concerned: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water.

Specific treatment (see supplemental first aid instructions on this label).

If skin irritation occurs: Get medical advice/attention.

Take off 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.

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Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Store locked up.

Dispose of contents/container in accordance with local and national regulations.

Hazards Not Otherwise Classified (HNOC), Other Hazards

Contact with skin may cause a cross-allergic reaction in persons already sensitized to acrylates.

Polymerization may occur from excessive heat, contamination or exposure to direct sunlight.

3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS

Component / CAS No.	%	GHS Classification		
Pentaerythritol, ethoxylated, esters with acrylic	45 - 55	Skin Irrit. 2 (H315)		
acid		Eye Irrit. 2A (H319)		
51728-26-8		Aquatic acute 2 (H401)		
		Aquatic chronic 2 (H411)		
Hydroquinone	< 0.2	Carc. 2 (H351)		
123-31-9		Muta. 2 (H341)		
		Acute Tox. 4 (H302)		
		Skin Irrit. 3 (H316)		
		Eye Dam. 1 (H318)		
		Skin Sens. 1B (H317)		
		Aquatic Acute 1 (H400)		
		Aquatic Chronic 1 (H410)		
Acrylated Resin	45 - 55	Skin Irrit. 2 (H315)		
-		Eye Irrit. 2A (H319)		

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:

Remove contaminated clothing and shoes without delay. Wash immediately with plenty of water. Do not reuse contaminated clothing without laundering. Get medical attention if pain or irritation persists after washing or if signs and symptoms of overexposure appear.

Eye Contact:

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical advice if there are persistent symptoms.

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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:

full water jet, high pressure water jet.

Protective Equipment:

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See SDS 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:

Avoid release to the environment.

References to other sections:

See Sections 7, 8 and 13 for additional information.

7. HANDLING AND STORAGE

HANDLING

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

and eye/face protection.

Special Handling Statements: Avoid excessive heat, contamination or exposure to direct sunlight to prevent polymerization. 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.

STORAGE

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

Storage Temperature: Store at 4 - 40 °C 39 - 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.

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 - 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. Use PE gloves as under gloves for difficult situations like for instance: high exposure, unknown composition or unknown properties of the chemicals.

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.

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Exposure Limit(s)

123-31-9 Hydroquinone

OSHA (PEL): 2 mg/m³ (TWA) ACGIH (TLV): 1 mg/m³ (TWA) Other Value: Not established

Biological Exposure Limit(s)

No values have been established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color: light brownish yellow clear viscous liquid mild organic

Odor: mild organic Boiling Point: > 100 °C 212 °F

Melting Point: Not available

Vapor Pressure: < 1.33 hPa @ 20 °C

Specific Gravity/Density: 1.11 g/cm³
Vapor Density: 1.11 g/cm³
Not available

Percent Volatile (% by wt.): < 0.5

pH: Not available
Saturation In Air (% By Vol.): Not available
Evaporation Rate: Not available
Solubility In Water: Insoluble
Volatile Organic Content: Not available

Flash Point: > 100 °C 212 °F Cleveland Open Cup

Flammable Limits (% By Vol): Not available Autoignition Temperature: Not available Partition coefficient Not available

(n-octanol/water):

Odor Threshold:
Viscosity (Kinematic):
Viscosity (Dynamic):
Very viscous liquid
Normal combustion
Oxidizing Properties:
Not available

10. STABILITY AND REACTIVITY

Reactivity: No information available

Stability: Stable.

Conditions To Avoid: Avoid direct exposure to sunlight. Avoid friction with temperature increase as

result. Loss of dissolved air. Loss of polymerization inhibitor.

Polymerization: May occur

Conditions To Avoid: None known

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Materials To Avoid: Strong oxidizing agents and strong bases.

Peroxides reactive metals Strong alkalies Free radical initiators.

Copper, copper alloys, carbon steel, iron and rust.

Hazardous Decomposition

Products:

oxides of carbon hydrocarbons

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: Causes skin irritation

Serious eye damage / eye irritation: Causes serious eye irritation

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: Suspected of causing cancer

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 > 2000 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 Irritating
Acute Irritation eye Irritating

ALLERGIC SENSITIZATION

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RESINS

Sensitization Skin No data Sensitization respiratory No data

GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay No data

OTHER INFORMATION

The product toxicity information above has been estimated.

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.

Contact with skin may cause a cross-allergic reaction in persons already sensitized to acrylates.

HAZARDOUS INGREDIENT TOXICITY DATA

Pentaerythritol, ethoxylated, esters with acrylic acid has an acute oral (rat) and acute dermal (rat) LD50 value > 2000mg/kg. A rabbit study revealed irritation to the eyes. Based on an in vitro study the substance showed a potential for irritation upon dermal exposure. Sensitization was not observed in guinea pigs. The substance is not expected to induce genotoxic effects. Based on animal studies with a structural analogue, it's not expected to have target organ toxicity, developmental toxicity or reproductive toxicity upon repeated exposure via the oral route. Carcinogenicity has not been investigated.

Hydroquinone has an acute oral (rat) and acute dermal (rabbit) LD50 value of 365 and > 2000mg/kg respectively. Direct contact with this material may cause severe eye damage and mild skin irritation. Irritating effects to the airways are not to be excluded. Prolonged or repeated exposure may cause allergic skin reactions. Genotoxicity studies have shown mixed results, both in animal- and in vitro-studies. Hydroquinone has shown evidence of a carcinogenic effect and possible risk of irreversible effects. There is no indication for a potential developmental or reproductive hazard.

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

Carcinogenicity

This product contains one or more Carcinogen Chemical(s) in accordance with IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), ACGIH (American Conference of Governmental Industrial Hygienists).

Component / CAS No.	Carcinogen
Hydroquinone	ACGIH A3
123-31-9	



WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov

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 Fish
Pentaerythritol, ethoxylated, esters with acrylic acid (51728-26-8)	LC50 = 1.76 mg/L - Brachydanio rerio (96 hrs)
Hydroquinone (123-31-9)	LC50 = 0.638 mg/L - Oncorhynchus mykiss (96h)
Acrylated Resin (-)	Not available

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Component / CAS No.	Toxicity to Water Flea		
Pentaerythritol, ethoxylated, esters with acrylic acid (51728-26-8)			
Hydroquinone (123-31-9)	EC50 = 0.134 mg/L - Daphnia magna (48h) NOEC = 0.095 mg/L - Daphnia magna (48h)		
Acrylated Resin (-)	Not available		

Component / CAS No.	Toxicity to Algae		
Pentaerythritol, ethoxylated, esters with	EC50 > 100 mg/L - Pseudokirchneriella subcapitata		
acrylic acid (51728-26-8)	(72hrs)		
Hydroquinone (123-31-9)	EC50 = 0.33 mg/L - Pseudokirchneriella subcapitata		
	(72h)		
	NOEC = 0.019 mg/L - Pseudokirchneriella		
	subcapitata (72h)		
Acrylated Resin (-)	Not available		

Component / CAS No.	Partition coefficient
Pentaerythritol, ethoxylated, esters with	Not available
acrylic acid (51728-26-8)	
Hydroquinone (123-31-9)	0.59
Acrylated Resin (-)	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 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.

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.

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Hazard Class: 9
Packing Group: III

UN/ID Number: UN3082

Transport Label Required: Miscellaneous Marine Pollutant

Marine Pollutant

TECHNICAL NAME (N.O.S.): ACRYLATE ESTER

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

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

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

SPECIAL PRECAUTIONS FOR USER

Protect against external heat sources higher than +40°C/104°F.

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.

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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 approved or exempt 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.

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.

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. 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
Hydroquinone	< 0.2	500	100	Yes	No
123-31-9		10000			

PRODUCT HAZARD CATEGORY UNDER SECTIONS 311 AND 312 OF EPCRA

Physical Hazards

Not applicable

Health Hazards

Carcinogenicity
Skin Corrosion or Irritation
Serious eye damage or eye irritation

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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: Revised Section 14

Date Prepared: 04/19/2023 **Date of last significant revision:** 04/26/2022

Component - Hazard Statements

Pentaerythritol, ethoxylated, esters with acrylic acid

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H401 - Toxic to aquatic life.

H411 - Toxic to aquatic life with long lasting effects.

Hydroquinone

H302 - Harmful if swallowed.

H316 - Causes mild skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H341 - Suspected of causing genetic defects.

H351 - Suspected of causing cancer.

H400 - Very toxic to aquatic life.

H410 - Very toxic to aquatic life with long lasting effects.

Acrylated Resin

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

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: 0120 015 230 (toll free) (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)

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Mexico and all others: +52-555-004-8763 (Carechem 24)

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

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