

## SAFETY DATA SHEET

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### 1. IDENTIFICATION

**Product Name:** EBECRYL® 871 radiation curing resins  
**Synonyms:** None  
**Product Description:** Acrylated resin in acrylated monomers  
**Molecular Formula:** Mixture  
**Molecular Weight:** Mixture  
**Intended/Recommended Use:** Radiation curable coating ingredient

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 1  
Skin Sensitizer Hazard Category 1B  
Aquatic Environment Acute Hazard Category 3  
Aquatic Environment Chronic Hazard Category 3

#### LABEL ELEMENTS



#### Signal Word

DANGER

#### Hazard Statements

Suspected of causing cancer  
Causes skin irritation  
Causes serious eye damage  
May cause an allergic skin reaction

Harmful to aquatic life

Harmful 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 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 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.

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.

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

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### HAZARDOUS INGREDIENTS

Component / CAS No.	%	GHS Classification	Carcinogen
Hydroquinone 123-31-9	< 0.15	Carc. 2 (H351) 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)	ACGIH A3
Oligomer acrylate -	50 - 70	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319)	-
Epoxy acrylate -	<= 25	Skin Sens. 1B (H317)	-
Acrylated resin -	7	Eye Irrit. 2A (H319) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	-
Acrylated esters -	<= 10	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

### 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 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

**Notes To Physician:**

No specific measures have been identified.

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## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:**

Use water spray, alcohol foam, carbon dioxide or dry chemical to extinguish fires. Water stream may be ineffective.

**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.

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## 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:**

Remove sources of ignition. 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.

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## 7. HANDLING AND STORAGE

**HANDLING**

**Precautions:** Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid breathing vapors or spray mist. Wear protective gloves and eye/face protection.

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

**STORAGE**

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. Keep containers tightly closed. Keep away from heat.

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

**Reason:** Quality.

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**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.

**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:**

Prevent eye and skin contact. 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.

**Skin Protection:**

Prevent contamination of skin or clothing when removing protective equipment. 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.

**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. It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

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## Exposure Limit(s)

<b>123-31-9</b>	<b>Hydroquinone</b>	
OSHA (PEL):		2 mg/m <sup>3</sup> (TWA)
ACGIH (TLV):		1 mg/m <sup>3</sup> (TWA)
Other Value:		Not established

## Biological Exposure Limit(s)

No values have been established.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Color:</b>	amber
<b>Appearance:</b>	liquid resin
<b>Odor:</b>	acrylate
<b>Boiling Point:</b>	> 100 °C
<b>Melting Point:</b>	Not available
<b>Vapor Pressure:</b>	0.013 hPa @ 25 °C
<b>Specific Gravity/Density:</b>	1.11 g/cm <sup>3</sup>
<b>Vapor Density:</b>	Not available
<b>Percent Volatile (% by wt.):</b>	Not available
<b>pH:</b>	Not applicable
<b>Saturation In Air (% By Vol.):</b>	Not available
<b>Evaporation Rate:</b>	Not applicable
<b>Solubility In Water:</b>	slightly soluble
<b>Volatile Organic Content:</b>	Not available
<b>Flash Point:</b>	> 100 °C Cleveland Open Cup
<b>Flammable Limits (% By Vol):</b>	Not available
<b>Autoignition Temperature:</b>	Not available
<b>Decomposition Temperature:</b>	Not available
<b>Partition coefficient (n-octanol/water):</b>	Not available
<b>Odor Threshold:</b>	Not available
<b>Viscosity (Kinematic):</b>	Not available
<b>Viscosity (Dynamic):</b>	45000 - 60000 mPa.s @ 25 °C
<b>Explosive Properties:</b>	Not applicable
<b>Oxidizing Properties:</b>	No

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## 10. STABILITY AND REACTIVITY

**Reactivity:** No information available

**Stability:** Stable.

**Conditions To Avoid:** Avoid direct exposure to sunlight. Avoid temperatures higher than 60°C. Avoid friction with temperature increase as result. Avoid exposure to strong UV sources. Loss of dissolved air. Loss of polymerization inhibitor. Avoid direct contact with heat sources.

<b>Polymerization:</b>	May occur
<b>Conditions To Avoid:</b>	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.
<b>Materials To Avoid:</b>	Avoid contact with peroxides. Avoid free radical producing initiators. Avoid contact with reactive metals. Contact with alkalis. They give an exothermic reaction with the product. Unintentional contact with them should be avoided.
<b>Hazardous Decomposition Products:</b>	hydrocarbons Smoke, carbon monoxide and carbon dioxide.

## 11. TOXICOLOGICAL INFORMATION

**Likely Routes of Exposure:** Oral, Eyes, Skin.

**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 damage

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

**Skin sensitization:** May cause an allergic skin reaction

**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	rabbit	Irritating
Acute Irritation	eye	rabbit	Causes serious damage

**ALLERGIC SENSITIZATION**

Sensitization	dermal	guinea pig	Sensitizing
Sensitization	respiratory		

**GENOTOXICITY****Assays for Gene Mutations**

Ames Salmonella Assay	Negative
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**OTHER INFORMATION**

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

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

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.

**11. TOXICOLOGICAL INFORMATION****HAZARDOUS INGREDIENT TOXICITY DATA**

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.

The toxicological properties of oligomer acrylate have not been fully investigated. Direct contact with this material may cause moderate eye and skin irritation.

The toxicological properties of epoxy acrylate have not been fully investigated. The LD50 oral (rat) and LD 50 dermal (rabbit) are estimated to be > 2000 mg/kg and > 2000 mg/kg, respectively. It is not expected to cause eye or skin irritation. Repeated or prolonged skin contact may cause allergic skin reactions.

Acrylated resin has an acute oral (rat) LD50 value of > 5000 mg/kg. The acute dermal (rat) LD50 is > 2000 mg/kg (based on a similar substance). This material was non-irritating to skin but was found to be irritating to eyes. No skin sensitization potential was observed up to the highest tested dose of 2.5% in a mouse local lymph node assay. No fertility or developmental effects were seen in reproductive toxicity studies (based on a similar substance).

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.



**WARNING:** Reproductive Harm – [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**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.

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
Hydroquinone (123-31-9)	LC50 = 0.638 mg/L - Oncorhynchus mykiss (96h)
Oligomer acrylate (-)	Not available
Epoxy acrylate (-)	Not available
Acrylated resin (-)	LC50 = 1.2 mg/l - Carp (Cyprinus carpio) (96h)
Acrylated esters (-)	Not available

Component / CAS No.	Toxicity to Water Flea
Hydroquinone (123-31-9)	EC50 = 0.134 mg/L - Daphnia magna (48h) NOEC = 0.095 mg/L - Daphnia magna (48h)
Oligomer acrylate (-)	Not available
Epoxy acrylate (-)	Not available
Acrylated resin (-)	EC50 = >10 mg/l - Daphnia magna (48h)
Acrylated esters (-)	Not available

Component / CAS No.	Toxicity to Algae
Hydroquinone (123-31-9)	EC50 = 0.33 mg/L - Pseudokirchneriella subcapitata (72h) NOEC = 0.019 mg/L - Pseudokirchneriella subcapitata (72h)
Oligomer acrylate (-)	Not available
Epoxy acrylate (-)	Not available
Acrylated resin (-)	ErC50 = >12 mg/L - Pseudokirchneriella subcapitata (72h)
Acrylated esters (-)	Not available

Component / CAS No.	Partition coefficient
Hydroquinone (123-31-9)	0.5
Oligomer acrylate (-)	Not available
Epoxy acrylate (-)	Not available
Acrylated resin (-)	Not available
Acrylated esters (-)	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.

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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? 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

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## 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.

**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.

**New Zealand:** This product is approved or exempt under the Hazardous Substances and New Organisms (HSNO) Act.

**China:** All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

**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).

#### **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**

Carcinogenicity

Skin Corrosion or Irritation

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

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## **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:** Revised Section 11

**Date Prepared:** 08/25/2018

**Date of last significant revision:** 12/02/2014

### **Component - Hazard Statements**

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.

Oligomer acrylate

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

Epoxy acrylate

H317 - May cause an allergic skin reaction.

Acrylated resin

H319 - Causes serious eye irritation.

H411 - Toxic to aquatic life with long lasting effects.

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.

## Emergency phone numbers for other regions

### Asia Pacific

Australia: +61 1800 022 037 (Allnex Australia)

China (PRC): +86(0)25 8547 7110 (Jiangsu registration center) / +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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Prepared By: Product Stewardship & Regulatory Affairs Department, <http://www.allnex.com/contact>

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