

## SAFETY DATA SHEET

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### 1. IDENTIFICATION

**Product Name:** EBECRYL® 170 radiation curing resins  
**Synonyms:** None  
**Product Description:** Acrylated acidic compound  
**Molecular Formula:** Mixture  
**Molecular Weight:** Mixture  
**Intended/Recommended Use:** Radiation curable coating ingredient, Coatings & 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

Serious Eye Damage / Eye Irritation Hazard Category 1

Skin Sensitizer Hazard Category 1B

#### LABEL ELEMENTS



#### Signal Word

DANGER

#### Hazard Statements

Causes serious eye damage

May cause an allergic skin reaction

#### Precautionary Statements

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.

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.

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

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

Wash contaminated clothing before reuse.

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
Phosphoric acid 7664-38-2	5 - 10	Met. Corr. 1 (H290) Skin Corr. 1B (H314) Eye Dam. 1 (H318)
2-Hydroxyethylacrylate 818-61-1	~ 0.2	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1B (H317) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412)
Acid modified diacrylate -	50 - 60	Skin Irrit. 3 (H316) Eye Irrit. 2A (H319)
Acid modified acrylate -	30 - 40	Skin Irrit. 3 (H316) Eye Irrit. 2A (H319)

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. Apply artificial respiration if patient is not breathing. 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.

##### 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.

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**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 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:**

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 7, 8 and 13 for additional information.

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**7. HANDLING AND STORAGE****HANDLING**

**Precautions:** 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). This material corrodes steel at a rate less than 6.25 mm (0.25 inch) a year at a test temperature of 55 °C (130 °F). By analogy with a product of similar composition. 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.

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

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. 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:

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)

**7664-38-2 Phosphoric acid**

OSHA (PEL):	1 mg/m <sup>3</sup> (TWA)
ACGIH (TLV):	3 mg/m <sup>3</sup> (STEL)
	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>	colorless
<b>Appearance:</b>	clear viscous liquid
<b>Odor:</b>	acidic
<b>Boiling Point:</b>	Decomposition prior to boiling
<b>Melting Point:</b>	-55 °C -67 °F Glass transition point
<b>Vapor Pressure:</b>	0.81 Pa @ 20 °C
<b>Specific Gravity/Density:</b>	1.35 g/cm <sup>3</sup> @ 23°C
<b>Vapor Density:</b>	Not available
<b>Percent Volatile (% by wt.):</b>	< 0.3 %
<b>pH:</b>	Not available
<b>Saturation In Air (% By Vol.):</b>	Not available
<b>Evaporation Rate:</b>	Not available
<b>Solubility In Water:</b>	486 g/L @ 20 °C
<b>Volatile Organic Content:</b>	Not applicable
<b>Flash Point:</b>	> 130 °C 266 °F Pensky-Martens Closed Cup
<b>Flammable Limits (% By Vol):</b>	Not applicable
<b>Autoignition Temperature:</b>	320 - 325 °C 608 - 617 °F
<b>Decomposition Temperature:</b>	Not applicable
<b>Partition coefficient (n-octanol/water):</b>	-1 - 1.2 OECD 117
<b>Odor Threshold:</b>	Not available
<b>Viscosity (Kinematic):</b>	Not applicable
<b>Viscosity (Dynamic):</b>	2250 - 3750 mPa.s @ 25 °C
<b>Flammability:</b>	Not available
<b>Oxidizing Properties:</b>	Not available

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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.

**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.

**Materials To Avoid:**

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.

**Hazardous Decomposition Products:**

Carbon dioxide  
 Carbon monoxide (CO)

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

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

**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
			(estimated)	
inhalation	rat	Acute LC50	4	hr
			No data	

### LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	rabbit	mild
Acute Irritation	eye	Causes serious damage	

**ALLERGIC SENSITIZATION**

Sensitization	Skin	mouse	Sensitizing
Sensitization	respiratory	No data	

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

Ames Salmonella Assay	Salmonella Typhimurium	Negative
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**OTHER INFORMATION**

The toxicity data above are the results from Allnex sponsored studies or from the available public literature.

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.

**HAZARDOUS INGREDIENT TOXICITY DATA**

Phosphoric acid has reported acute oral (rat) and acute dermal (rat) LD50 values of 3500 mg/kg and 2740 mg/kg, respectively. Phosphoric acid has an acute 1-hour inhalation LC50 (rat) of greater than 25.5 mg/m<sup>3</sup>. Phosphoric acid causes skin irritation and burns. Phosphoric acid has been reported to cause conjunctivitis and eye burns. Inhalation of acid mist can cause irritation of the lungs, upper respiratory tract, eyes and skin. Phosphoric acid has been reported to cause dermatitis. No genotoxic effects were seen in in vitro studies. No reproductive adverse effects were noted at the highest dose in animal studies. Prenatal toxicity studies on structural analogues have not shown any alerts. Carcinogenicity has not been investigated.

2-Hydroxyethyl acrylate has acute oral (rat) and dermal (rabbit/rat) LD50 values of 540 - 960 mg/kg and >1000 mg/kg, respectively. Direct skin contact with this material causes burns. Direct contact with eyes causes burns resulting in permanent damage. May cause allergic skin reactions. This material can be absorbed through the skin in harmful amounts. Inhalation exposure may cause irritation to the respiratory tract. Vapor may cause irritation to eyes. This substance was not mutagenic in the Ames Salmonella Assay. This material was mutagenic in various cell culture systems (i.e., Mouse Lymphoma Assay); however, these results could not be confirmed during in vivo tests in mammals. In long-term animal studies in which the substance was given by inhalation, a carcinogenic effect was not observed.

The toxicological properties of acid modified diacrylate have not been fully investigated. Direct contact with this material may cause moderate eye and mild skin irritation.

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

**12. ECOLOGICAL INFORMATION****TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS**

This material is not expected to be harmful to fish or aquatic organisms.

This material is not classified as dangerous for the environment.

Information based on a structurally similar material.

**RESULTS OF PBT AND vPvB ASSESSMENT**

Not determined

**HAZARDOUS INGREDIENT TOXICITY DATA**

Component / CAS No.	Toxicity to Fish
Phosphoric acid (7664-38-2)	Not available
2-Hydroxyethylacrylate (818-61-1)	LC50 = 4.8 mg/L - Pimephales promelas - 96hrs
Acid modified diacrylate (-)	Not available
Acid modified acrylate (-)	Not available

Component / CAS No.	Toxicity to Water Flea
Phosphoric acid (7664-38-2)	Not available
2-Hydroxyethylacrylate (818-61-1)	EC50 = 9.3 mg/L - Daphnia magna - 48hrs NOEC = 0.86 mg/L - Daphnia magna - 21d
Acid modified diacrylate (-)	Not available
Acid modified acrylate (-)	Not available

Component / CAS No.	Toxicity to Algae
Phosphoric acid (7664-38-2)	Not available
2-Hydroxyethylacrylate (818-61-1)	ErC50 = 6 mg/L - Pseudokirchnerella subcapitata - 72hrs NOErC = 1 mg/L - Pseudokirchnerella subcapitata - 72hrs
Acid modified diacrylate (-)	Not available
Acid modified acrylate (-)	Not available

Component / CAS No.	Partition coefficient
Phosphoric acid (7664-38-2)	Not available
2-Hydroxyethylacrylate (818-61-1)	0.21
Acid modified diacrylate (-)	Not available
Acid modified acrylate (-)	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

### SPECIAL PRECAUTIONS FOR USER

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

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## 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.

**Canada:** One or more components of this product are NOT included on the Canadian Domestic Substances List (DSL). These components are included on the Canadian Non-Domestic Substances List (NDSL).

**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:** All components of this product are included in the Australian Inventory of Industrial Chemicals (AIIC) or are not required to be listed on AIIC.

**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:** 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).

**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
Phosphoric acid 7664-38-2	5 - 10	None	5000	No	No

#### PRODUCT HAZARD CATEGORY UNDER SECTIONS 311 AND 312 OF EPCRA

##### Physical Hazards

Not applicable

##### Health Hazards

Respiratory or Skin Sensitization  
Serious eye damage or eye irritation

## 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 2  
Revised Section 3  
Revised Section 11

**Date Prepared:** 04/09/2021

**Date of last significant revision:** 04/09/2021

#### Component - Hazard Statements

Phosphoric acid

H290 - May be corrosive to metals.  
H314 - Causes severe skin burns and eye damage.  
H318 - Causes serious eye damage.

2-Hydroxyethylacrylate

H302 - Harmful if swallowed.  
H311 - Toxic in contact with skin.  
H314 - Causes severe skin burns and eye damage.  
H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H400 - Very toxic to aquatic life.

H412 - Harmful to aquatic life with long lasting effects.

Acid modified diacrylate

H316 - Causes mild skin irritation.

H319 - Causes serious eye irritation.

Acid modified acrylate

H316 - Causes mild 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: +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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