

## SAFETY DATA SHEET

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### 1. IDENTIFICATION

**Product Name:** CYMEL® 659E RESIN  
**Synonyms:** None  
**Product Description:** Butylated benzoguanamine-formaldehyde resin in butanol  
**Molecular Formula:** Polymer  
**Molecular Weight:** Polymer  
**Intended/Recommended Use:** Crosslinking resin

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

Flammable Liquids Hazard Category 3  
Carcinogenicity Hazard Category 1B  
Specific Target Organ Toxicity - Repeated Exposure Hazard Category 2  
Specific Target Organ Toxicity - Single Exposure Hazard Category 3  
Skin Corrosion / Irritation Hazard Category 2  
Serious Eye Damage / Eye Irritation Hazard Category 1  
Skin Sensitizer Hazard Category 1A  
Aquatic Environment Chronic Hazard Category 4

#### LABEL ELEMENTS



**Signal Word**  
DANGER

#### Hazard Statements

Flammable liquid and vapor  
May cause cancer  
May cause damage to organs through prolonged or repeated exposure

May cause drowsiness or dizziness  
 May cause respiratory irritation  
 Causes skin irritation  
 Causes serious eye damage  
 May cause an allergic skin reaction  
 May cause long lasting harmful effects to aquatic life

### 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.  
 Obtain special instructions before use.  
 Do not breathe dust/fume/gas/mist/vapours/spray.  
 Use only outdoors or in a well-ventilated area.  
 Wash face, hands and any exposed skin thoroughly after handling.  
 Contaminated work clothing should not be allowed out of the workplace.  
 Avoid release to the environment.  
 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 to extinguish.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 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 in a well-ventilated place. Keep cool.  
 Store locked up.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Dispose of contents/container in accordance with local and national regulations.

### Hazards Not Otherwise Classified (HNOC), Other Hazards

Not applicable

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### HAZARDOUS INGREDIENTS

Component / CAS No.	%	GHS Classification
Benzoguanamine formaldehyde resin, butylated 68002-26-6	70 - 74	Aquatic Chronic 4 (H413)
Butanol 71-36-3	19 - 21	Flam. Liq. 3 (H226) Acute Tox. 4 (H302) STOT SE 3 (H335) STOT SE 3 (H336) Skin Irrit. 2 (H315) Eye Dam. 1 (H318)
Xylene 1330-20-7	2 - 4	Flam. Liq. 3 (H226) Acute Tox. 4 (H312) Acute Tox. 4 (H332) STOT RE 2 (H373) STOT Single 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2A (H319)

Ethylbenzene 100-41-4	~ 0.6	Asp. Tox. 1 (H304) Flam. Liq. 2 (H225) Acute Tox. 4 (H332) STOT RE 2 (H373) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Aquatic Chronic 3 (H412)
Formaldehyde 50-00-0	< 0.6	Carc. 1B (H350) Muta. 2 (H341) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1A (H317) Aquatic Acute 2 (H401)

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

Not applicable.

#### Notes To Physician:

No specific measures have been identified.

## 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media:

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

**Unsuitable Extinguishing Media:**

full 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. Remove sources of ignition.

**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:** 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment. Use only outdoors or in a well-ventilated area. Avoid breathing vapors or spray mist.

**Special Handling Statements:** 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.

### STORAGE

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. Store in a cool, dry, well ventilated place and keep container tightly closed. Keep away from heat sources and direct sunlight. 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 -20 - 30 °C -4 - 86 °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. Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed.

#### Gloves for repeated or prolonged exposure - non exhaustive list:

Polyethylene Nylon (PE), thickness: > 0.062 mm, break through time: > 480 min

#### Gloves for short term exposure/splash protection - non exhaustive list:

Nitrile rubber (NBR), thickness: 0.38 mm, break through time: up to 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:

Nitrile rubber (NBR), thickness: 0.12 mm

Natural rubber (NRL), thickness: 0.12 mm

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)

### 71-36-3 Butanol

OSHA (PEL):

100 ppm (TWA)

300 mg/m<sup>3</sup> (TWA)

ACGIH (TLV):	20 ppm (TWA)
Other Value:	Not established
<b>1330-20-7 Xylene</b>	
OSHA (PEL):	100 ppm (TWA) 435 mg/m <sup>3</sup> (TWA)
ACGIH (TLV):	20 ppm (TWA)
Other Value:	Not established
<b>100-41-4 Ethylbenzene</b>	
OSHA (PEL):	100 ppm (TWA) 435 mg/m <sup>3</sup> (TWA)
ACGIH (TLV):	20 ppm (TWA)
Other Value:	Not established
<b>50-00-0 Formaldehyde</b>	
OSHA (PEL):	0.75 ppm (TWA) 2 ppm (STEL) 2 ppm STEL 15 min 0.5 ppm Action Level 0.75 ppm TWA
ACGIH (TLV):	0.3 ppm (STEL) 0.1 ppm (TWA)
Other Value:	Not established

### Biological Exposure Limit(s)

#### Xylene 1330-20-7

Biological Exposure Indices (ACGIH) 1.5 g/g creatinine (urine - end of shift)

#### Ethylbenzene 100-41-4

Biological Exposure Indices (ACGIH) 0.15 g/g creatinine (urine - end of shift)

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Color:</b>	colorless
<b>Appearance:</b>	liquid
<b>Odor:</b>	formaldehyde and butanol
<b>Boiling Point:</b>	Not applicable
<b>Melting Point:</b>	Not applicable
<b>Vapor Pressure:</b>	Not available
<b>Specific Gravity/Density:</b>	1.06 g/cm <sup>3</sup>
<b>Vapor Density:</b>	> 1
<b>Percent Volatile (% by wt.):</b>	~ 28
<b>pH:</b>	Not applicable
<b>Saturation In Air (% By Vol.):</b>	Not available
<b>Evaporation Rate:</b>	< 1
<b>Solubility In Water:</b>	Insoluble
<b>Volatile Organic Content:</b>	Not available
<b>Flash Point:</b>	35 °C 95 °F Setaflash Closed 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 (log value):</b>	Not available
<b>Odor Threshold:</b>	Not available
<b>Viscosity (Kinematic):</b>	Not available
<b>Viscosity (Dynamic):</b>	Not available
<b>Flammability:</b>	Not available

**Oxidizing Properties:** No

**Other safety characteristics**

Not applicable

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## 10. STABILITY AND REACTIVITY

**Reactivity:** No information available

**Stability:** Stable.

**Conditions To Avoid:** None known.

**Polymerization:** Will not occur

**Conditions To Avoid:** None known

**Materials To Avoid:** No specific incompatibility

**Hazardous Decomposition Products:** Ammonia (NH<sub>3</sub>)  
Carbon monoxide (CO)  
Formaldehyde  
hydrogen cyanide (HCN)  
oxides of nitrogen  
butanol

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## 11. TOXICOLOGICAL INFORMATION

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

**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:** May cause 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:** May cause drowsiness or dizziness. May cause respiratory irritation.

**Specific target organ toxicity (STOT) - repeated exposure:** May cause damage to organs through prolonged or repeated exposure.

**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	> 20 mg/l (Vapors)

### LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	Skin	Irritating
Acute Irritation	eye	Causes serious damage

### ALLERGIC SENSITIZATION

Sensitization	Skin	Sensitizing
Sensitization	respiratory	No data

### SUBACUTE/SUBCHRONIC TOXICITY

oral (gavage)	rat	No data
dermal	rat	No data

**Specific target organ toxicity (repeated exposure):** May cause damage to central nervous system, liver and kidneys through prolonged or repeated exposure by inhalation. .

### GENOTOXICITY

#### Assays for Gene Mutations

Ames Salmonella Assay No data

### OTHER INFORMATION

The product toxicity information above has been estimated.

### HAZARDOUS INGREDIENT TOXICITY DATA

Butanol has acute oral (rat) and dermal (rabbit) LD50 values of 0.790 g/kg and 3.4 g/kg, respectively. The inhalation LC50 (rat) value after a 4-hour exposure is 8000 ppm (24.24 mg/L). Acute overexposure to vapors of butanol may cause headache, dizziness, drowsiness, blurred vision and a burning sensation in the eyes. Overexposure to butanol vapors can produce headache and central nervous system depression. Acute ingestion of butanol has caused unconsciousness and coma. Direct contact with butanol may cause severe eye irritation and moderate skin irritation. Butanol has caused effects on the developing embryo/fetus in the presences of material toxicity.

Xylene has an acute oral LD50 (rat) of > 3523 mg/kg, acute dermal LD50 (rabbit) value of 4200 mg/kg, and an acute 4-hour LC50 (rat) of 29 mg/l (vapor). Inhalation of vapors may be irritating to the nose and throat. Inhalation of high concentrations may result in nausea, vomiting, headache, ringing in the ears, and severe breathing difficulties, which may be delayed in onset. High vapor concentrations are anesthetic and central nervous system depressants. Ingestion causes burning sensation in mouth and stomach, nausea vomiting and salivation. Minute amounts aspirated into the lungs can produce a severe hemorrhagic pneumonitis with severe pulmonary injury or death. Chronic inhalation can cause headache, loss of appetite, nervousness and pale skin. Skin contact results in moderate irritation and loss of natural oils. Repeated or prolonged skin contact may cause a skin rash. May be absorbed through the skin. Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage. Repeated exposure of eyes to high concentrations of vapor may cause reversible eye damage. Chronic, repeated exposure may cause blood cell damage resulting in low blood cell count. May damage liver and kidneys. Xylene has been investigated for reproductive toxicity and may cause teratogenic effects.

Ethylbenzene has acute oral (rat) and dermal (rabbit) LD50 values of 3500 mg/kg and 15400 mg/kg respectively. The 4-hour inhalation LC50 in rats is 2180 ppm. It is a mild eye (rated 2 on a scale of 10) and a mild skin (rated 4 on a



scale of 10) irritant. Prolonged exposure to the vapor of ethylbenzene may cause irritation of the eyes and upper respiratory tract, vertigo, motor ataxia, unconsciousness, and hematological disorders and hepatobiliary complaints. The International Agency for Research on Cancer has evaluated ethylbenzene and classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. Developmental toxicity studies in rats indicate skeletal malformation and reduced foetal weight.

Formaldehyde has oral (rat) and dermal (rabbit) LD50 values of 640 mg/kg and 270 mg/kg, respectively. 50% of the mice had reduced respiration rate following a 10 minutes inhalation exposure at a concentration of 4.9 ppm. Irritation of the nose and throat has been observed in people exposed to formaldehyde vapor levels in excess of 1 ppm. Normal breathing may be seriously impaired and serious lung damage can occur. Formaldehyde has been reported to cause pulmonary hypersensitivity in some individuals who were exposed to concentrations known to cause irritation; however, no pulmonary sensitization has been demonstrated in laboratory animal studies. Formaldehyde solutions can cause severe eye and skin irritation. Repeated skin exposure to solutions of 2% or more formaldehyde has caused allergic skin reactions. Formaldehyde was found to be weakly genotoxic in a number of in vitro genotoxicity tests and positive in certain in vivo genotoxicity studies. Formaldehyde did not cause birth defects in rats inhaling concentrations up to 10 ppm. However, a study using higher levels did show a slight but statistically significant reduction in male fetal body weight. Lifetime inhalation of formaldehyde vapor at concentrations above 5 ppm for 6 hours per day, caused nasal tumors in laboratory animals. The International Agency for Research on Cancer (IARC) has classified formaldehyde as a Group 1 (known) human carcinogen based on epidemiological evidence linking formaldehyde exposure to the occurrence of nasopharyngeal cancer, a rare type of cancer. IARC also found limited evidence of cancer of the nasal cavity and paranasal sinuses and insufficient evidence for an association between formaldehyde and leukemia. Inhalation caused liver and kidney damage in laboratory animal tests.

### 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
Ethylbenzene 100-41-4	IARC 2B ACGIH A3
Formaldehyde 50-00-0	IARC 1 NTP ACGIH A2



**WARNING:** Cancer and 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:** May cause long lasting harmful effects to aquatic life.

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**

<b>Component / CAS No.</b>	<b>Toxicity to Fish</b>
Benzoguanamine formaldehyde resin, butylated (68002-26-6)	Not available
Butanol (71-36-3)	LC50 100000 - 500000 µg/L - Lepomis macrochirus (96h) LC50 = 1740 mg/L - Pimephales promelas (96h)
Xylene (1330-20-7)	LC50 = 13.4 mg/L - Pimephales promelas (96h)  LC50 2.661 - 4.093 mg/L - Oncorhynchus mykiss (96h)  LC50 13.5 - 17.3 mg/L - Oncorhynchus mykiss (96h)  LC50 13.1 - 16.5 mg/L - Lepomis macrochirus (96h)  LC50 = 19 mg/L - Lepomis macrochirus (96h)  LC50 7.711 - 9.591 mg/L - Lepomis macrochirus (96h)  LC50 23.53 - 29.97 mg/L - Pimephales promelas (96h)  LC50 = 780 mg/L - Cyprinus carpio (96h)  LC50 > 780 mg/L - Cyprinus carpio (96h)  LC50 30.26 - 40.75 mg/L - Poecilia reticulata (96h)
Ethylbenzene (100-41-4)	LC50 11.0 - 18.0 mg/L - Oncorhynchus mykiss (96h)  LC50 = 4.2 mg/L - Oncorhynchus mykiss (96h)  LC50 7.55 - 11 mg/L - Pimephales promelas (96h)  LC50 = 32 mg/L - Lepomis macrochirus (96h)  LC50 9.1 - 15.6 mg/L - Pimephales promelas (96h)  LC50 = 9.6 mg/L - Poecilia reticulata (96h)
Formaldehyde (50-00-0)	LC50 = 6.7 mg/L - Morone saxatilis (96h)

<b>Component / CAS No.</b>	<b>Toxicity to Water Flea</b>
Benzoguanamine formaldehyde resin, butylated (68002-26-6)	Not available
Butanol (71-36-3)	EC50 = 1983 mg/L - Daphnia magna (48h)
Xylene (1330-20-7)	EC50 = 3.82 mg/L - water flea (48h)  LC50 = 0.6 mg/L - Gammarus lacustris (48h)
Ethylbenzene (100-41-4)	EC50 1.8 - 2.4 mg/L - Daphnia magna (48h)
Formaldehyde (50-00-0)	EC50 = 5.8 mg/L - Daphnia pulex (48h)

<b>Component / CAS No.</b>	<b>Toxicity to Algae</b>
Benzoguanamine formaldehyde resin,	Not available

butylated (68002-26-6)	
Butanol (71-36-3)	EC50 > 500 mg/L - Desmodemus subspicatus (72h)
Xylene (1330-20-7)	Not available
Ethylbenzene (100-41-4)	EC50 = 4.6 mg/L - Pseudokirchneriella subcapitata (72h) EC50 > 438 mg/L - Pseudokirchneriella subcapitata (96h) EC50 2.6 - 11.3 mg/L - Pseudokirchneriella subcapitata (72h) EC50 1.7 - 7.6 mg/L - Pseudokirchneriella subcapitata (96h)
Formaldehyde (50-00-0)	EC50 = 4.89 mg/L - Desmodemus subspicatus (72hrs)

Component / CAS No.	Partition coefficient
Benzoguanamine formaldehyde resin, butylated (68002-26-6)	Not available
Butanol (71-36-3)	1
Xylene (1330-20-7)	3.15
Ethylbenzene (100-41-4)	3.6
Formaldehyde (50-00-0)	0.35

### 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: RESIN SOLUTION  
 Hazard Class: 3  
 Packing Group: III  
 UN/ID Number: UN1866

Transport Label Required: Flammable Liquid

<u>Component / CAS No.</u>	<u>Hazardous Substances/Reportable Quantity of Product (lbs)</u>
Butanol	23809
Xylene	2500
Formaldehyde	10101

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: III  
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: III  
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: III  
Transport Label Required: Flammable Liquid

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

**European Economic Area (including EU):** When purchased 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:** All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

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

**Korea:** All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory. When purchased from Allnex Korea or Chemart distributor this product is compliant with the ARECs (the Act on the Registration and Evaluation, etc. of Chemical Substances). All its components are either excluded, exempt, pre-notified and/or registered. When purchased from another allnex entity, please contact PSRA-KREACH@allnex.com to check the possibility to be covered by our Only Representative.

**Philippines:** All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine 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).

**Turkey:** When purchased directly from Allnex by a Turkish legal entity, this product is compliant with the PRE-registration requirements of KKDIK as all its components are either pre-registered, excluded and/or exempt.

#### 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
Butanol 71-36-3	19 - 21	None	5000	Yes	No
Xylene 1330-20-7	2 - 4	None	100	Yes	No
Formaldehyde 50-00-0	< 1.0	500	100	Yes	No
Ethylbenzene 100-41-4	~ 0.6	None	1000	Yes	No

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

##### Physical Hazards

Flammable (gases, aerosols, liquids, or solids)

##### Health Hazards

Carcinogenicity

Skin Corrosion or Irritation

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

## 16. OTHER INFORMATION

**NFPA Hazard Rating (National Fire Protection Association)**

Health: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

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

Instability: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

**Reasons for Issue:** Revised Section 14

**Date Prepared:** 06/24/2024

**Date of last significant revision:** 11/28/2023

**Component - Hazard Statements**

Benzoguanamine formaldehyde resin, butylated

H413 - May cause long lasting harmful effects to aquatic life.

Butanol

H226 - Flammable liquid and vapor.

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H335 - May cause respiratory irritation.

H336 - May cause drowsiness or dizziness.

Xylene

H226 - Flammable liquid and vapor.

H304 - May be fatal if swallowed and enters airways.

H312 - Harmful in contact with skin.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H332 - Harmful if inhaled.

H335 - May cause respiratory irritation.

H373 - May cause damage to organs through prolonged or repeated exposure.

Ethylbenzene

H225 - Highly flammable liquid and vapor.

H304 - May be fatal if swallowed and enters airways.

H332 - Harmful if inhaled.

H373 - May cause damage to organs through prolonged or repeated exposure.

H401 - Toxic to aquatic life.

H412 - Harmful to aquatic life with long lasting effects.

Formaldehyde

H301 - Toxic 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.

H331 - Toxic if inhaled.

H341 - Suspected of causing genetic defects.

H350 - May cause cancer.

H401 - Toxic to aquatic life.

**Emergency phone numbers for other regions****Asia Pacific**

Australia: +61 1800 022 037 (Allnex Australia)

China (PRC): +86 532 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)

**Northern Asia**

+44 (0) 1235 239 670 (Carechem 24)

**Europe**

+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 Sustainability & Regulatory Affairs Department, <http://www.allnex.com/contact>

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