SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: PHENODUR® PR 263/70B phenolic resins
Synonyms: None
Product Description: Phenolic Resin Resole
Molecular Formula: Mixture
Molecular Weight: Mixture
Intended/Recommended Use: Binder

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
Germ Cell Mutagenicity Hazard Category 2
Acute Toxicity (Oral) Hazard Category 4
Specific Target Organ Toxicity - Repeated Exposure Hazard Category 2
Specific Target Organ Toxicity - Single Exposure Hazard Category 3
Skin Corrosion / Irritation Hazard Category 1B
Serious Eye Damage / Eye Irritation Hazard Category 1
Skin Sensitizer Hazard Category 1A
Aquatic Environment Acute Hazard Category 3
Aquatic Environment Chronic Hazard Category 3

LABEL ELEMENTS

Signal Word
DANGER
**Hazard Statements**
Flammable liquid and vapor
May cause cancer
Suspected of causing genetic defects
Harmful if swallowed
May cause damage to organs through prolonged or repeated exposure
May cause drowsiness or dizziness
May cause respiratory irritation
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Harmful to aquatic life
Harmful to aquatic life with long lasting effects

**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.
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Do not breathe dust/fume/gas/mist/vapours/spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
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 SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Wash contaminated clothing before reuse.
Immediately call a POISON CENTER or doctor/physician.
Specific treatment (see supplemental first aid instructions on this label).
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
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

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**HAZARDOUS INGREDIENTS**

<table>
<thead>
<tr>
<th>Component / CAS No.</th>
<th>%</th>
<th>GHS Classification</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea P/W formaldehyde, isobutylated 68002-18-6</td>
<td>~ 20</td>
<td>Aquatic Chronic 4 (H413)</td>
<td>-</td>
</tr>
<tr>
<td>Isobutanol 78-83-1</td>
<td>~ 13</td>
<td>Flam. Liq. 3 (H226) STOT SE 3 (H335) STOT SE 3 (H336) Skin Irrit. 2 (H315) Eye Dam. 1 (H318)</td>
<td>-</td>
</tr>
</tbody>
</table>
### 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:**
Remove contaminated clothing and shoes without delay. Wear impermeable gloves. Wash immediately with plenty of water. Pay particular attention to skin crevices, nail folds, etc. Do not reuse contaminated clothing without laundering. Do not reuse contaminated leatherware. Obtain medical attention.

**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:**

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<tbody>
<tr>
<td>Butanol 71-36-3</td>
<td>~ 13</td>
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<tr>
<td>Phenol 108-95-2</td>
<td>~ 4</td>
<td>Flam. Liq. 4 (H227)</td>
<td>Muta. 2 (H341)</td>
<td>Acute Tox. 3 (H301)</td>
<td>Acute Tox. 3 (H311)</td>
<td>Acute Tox. 3 (H331)</td>
<td>STOT RE 2 (H373)</td>
<td>Skin Corr. 1B (H314)</td>
<td>Eye Dam. 1 (H318)</td>
<td>Aquatic Acute 2 (H401)</td>
<td>Aquatic Chronic 2 (H411)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>IARC 1</td>
<td>NTP</td>
<td>ACGIH A2</td>
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<tr>
<td>Formaldehyde 50-00-0</td>
<td>&lt; 0.7</td>
<td>Carc. 1B (H350)</td>
<td>Muta. 2 (H341)</td>
<td>Acute Tox. 3 (H301)</td>
<td>Acute Tox. 3 (H311)</td>
<td>Acute Tox. 3 (H331)</td>
<td>Skin Corr. 1B (H314)</td>
<td>Eye Dam. 1 (H318)</td>
<td>Skin Sens. 1A (H317)</td>
<td>Aquatic Acute 2 (H401)</td>
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<td></td>
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<td></td>
<td></td>
<td>IARC 1</td>
<td>NTP</td>
<td>ACGIH A2</td>
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</tr>
</tbody>
</table>

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.
No specific measures have been identified.

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.

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.

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. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/clothing and eye/face protection. 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. Do not breathe 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.

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. Avoid flammable gas mixtures. Take precautionary measures against electrostatic loading - earthing necessary during loading operations. Vapours may form explosive
mixtures with air.

**Storage Temperature:** Room temperature  
**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:**
Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure. A full facepiece respirator also provides eye and face protection. Cutting, grinding or sanding of parts fabricated after curing may create respirable dust particles. Respiratory protection appropriate for this dust may be required. Refer to components listed above for potential hazardous components in the dust. For operations where inhalation exposure can occur use an approved respirator. Recommendations are listed below. Other protective respiratory equipment may be used based on user's own risk assessment. Recommended respirators include those certified by NIOSH.

**Eye Protection:**
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:**
Nitrile or fluorinated rubber gloves. Consider the porosity and elasticity data of the glove manufacturer and the specific conditions in the work place. 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, colour, flexibility etc) is noticed. 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:**
  - Neoprene rubber (NE), thickness: > 0.40 mm, break through time: up to 480 min
  - Butyl rubber (VB), thickness: > 0.30 mm, break through time: > 480 min

- **Gloves for short term exposure/splash protection - non exhaustive list:**
  - Natural rubber (NRL), thickness: 0.75 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:**
  - 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. 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.

**Exposure Limit(s)**

### 78-83-1 Isobutanol

<table>
<thead>
<tr>
<th></th>
<th>OSHA (PEL):</th>
<th>ACGIH (TLV):</th>
<th>Other Value:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OSHA (PEL):</strong></td>
<td>100 ppm (TWA)</td>
<td>50 ppm (TWA)</td>
<td>Not established</td>
</tr>
<tr>
<td><strong>ACGIH (TLV):</strong></td>
<td>100 ppm (TWA)</td>
<td>20 ppm (TWA)</td>
<td>Not established</td>
</tr>
</tbody>
</table>

### 71-36-3 Butanol

<table>
<thead>
<tr>
<th></th>
<th>OSHA (PEL):</th>
<th>ACGIH (TLV):</th>
<th>Other Value:</th>
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</thead>
<tbody>
<tr>
<td><strong>OSHA (PEL):</strong></td>
<td>100 ppm (TWA)</td>
<td>20 ppm (TWA)</td>
<td>Not established</td>
</tr>
<tr>
<td><strong>ACGIH (TLV):</strong></td>
<td>100 ppm (TWA)</td>
<td>20 ppm (TWA)</td>
<td>Not established</td>
</tr>
</tbody>
</table>

### 108-95-2 Phenol

<table>
<thead>
<tr>
<th></th>
<th>OSHA (PEL):</th>
<th>ACGIH (TLV):</th>
<th>Other Value:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OSHA (PEL):</strong></td>
<td>5 ppm (TWA)</td>
<td>5 ppm (TWA)</td>
<td>Not established</td>
</tr>
<tr>
<td><strong>ACGIH (TLV):</strong></td>
<td>5 ppm (TWA)</td>
<td>5 ppm (TWA)</td>
<td>Not established</td>
</tr>
</tbody>
</table>

### 50-00-0 Formaldehyde

<table>
<thead>
<tr>
<th></th>
<th>OSHA (PEL):</th>
<th>ACGIH (TLV):</th>
<th>Other Value:</th>
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</thead>
<tbody>
<tr>
<td><strong>OSHA (PEL):</strong></td>
<td>0.75 ppm (TWA)</td>
<td>0.75 ppm (TWA)</td>
<td>Not established</td>
</tr>
<tr>
<td><strong>ACGIH (TLV):</strong></td>
<td>0.75 ppm (TWA)</td>
<td>0.75 ppm (TWA)</td>
<td>Not established</td>
</tr>
</tbody>
</table>

**Biological Exposure Limit(s)**

### Phenol 108-95-2

**Biological Exposure Indices (ACGIH)**

- 250 mg/g creatinine (urine - end of shift)

**9. PHYSICAL AND CHEMICAL PROPERTIES**

- **Color:** clear to light yellow
- **Appearance:** liquid
- **Odor:** sweet
- **Boiling Point:** 100 - 200 °C 212 - 392 °F
- **Melting Point:** Not available
- **Vapor Pressure:** ~ 10 hPa @ 20 °C (value for solvent)
- **Specific Gravity/Density:** ~ 1.06 g/cm³ DIN EN ISO 2811-2 @ 20°C
- **Vapor Density:** Not available
- **Percent Volatile (% by wt.):** ~ 30
- **pH:** ~ 6 DIN ISO 976
- **Saturation In Air (% By Vol.):** Not available
- **Evaporation Rate:** Not available
- **Solubility In Water:** immiscible
- **Volatile Organic Content:** Not available
- **Flash Point:** ~ 48 °C 118.4 °F DIN EN ISO 1523
10. STABILITY AND REACTIVITY

Reactivity: No information available
Stability: Stable.

Conditions To Avoid: Excessively high temperatures and ignition sources. Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.
Polymerization: Will not occur
Conditions To Avoid: None known.
Materials To Avoid: Strong acids

Hazardous Decomposition Products: Carbon dioxide
Carbon monoxide (CO)
Formaldehyde
Phenol

11. TOXICOLOGICAL INFORMATION

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

Acute toxicity - oral: Harmful if swallowed
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 severe skin burns and eye damage.
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: Suspected of causing genetic defects
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.

**Route of Exposure:** oral, dermal, inhalation  **Affected Organs:** Skin, Kidneys, Liver, Central nervous system

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

## PRODUCT TOXICITY INFORMATION

### ACUTE TOXICITY DATA

<table>
<thead>
<tr>
<th>Route</th>
<th>Species</th>
<th>Acute LD50</th>
<th>Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>oral</td>
<td>rat</td>
<td>1310 mg/kg</td>
<td></td>
</tr>
<tr>
<td>dermal</td>
<td>rabbit</td>
<td>&gt; 5000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>inhalation</td>
<td>rat</td>
<td>Acute LC50 4 hr 6 mg/l (Dust/Mist)</td>
<td></td>
</tr>
</tbody>
</table>

### LOCAL EFFECTS ON SKIN AND EYE

- **Acute Irritation**
  - dermal: Corrosive
  - eye: Causes serious damage

### ALLERGIC SENSITIZATION

<table>
<thead>
<tr>
<th>Sensitization</th>
<th>Skin</th>
<th>Sensitizing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>respiratory</td>
<td>No data</td>
</tr>
</tbody>
</table>

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

### GENOTOXICITY

**Assays for Gene Mutations**

- Ames Salmonella Assay: No data

### OTHER INFORMATION

The product toxicity information above has been estimated.

## 11. TOXICOLOGICAL INFORMATION

### HAZARDOUS INGREDIENT TOXICITY DATA

**Isobutanol** has acute oral (rat) and dermal (rabbit) LD50 values of 2.46 g/kg and 2.46 - 3.4 g/kg, respectively. The LC50 (rat) following a 4-hour inhalation exposure is >8000 ppm (24.24 mg/L). Acute overexposure to isobutanol vapor can cause irritation to the eyes (severe), skin (moderate), and mucous membranes, as well as, central nervous system depression. Literature reports that acute oral exposure to isobutanol has produced CNS effects in animals. Direct contact with isobutanol may cause severe eye and mild to moderate skin irritation.

**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.

**Phenol** has an acute oral (rat) and acute dermal (rabbit) LD50 of 650 mg/kg and 660 mg/kg respectively. The 8-hour inhalation (rat) LC0 is 900 mg/m³. Acute exposure to phenol vapor may cause severe eye and respiratory irritation. Phenol may cause skin, eye and mucous membrane burns, and is readily absorbed through the skin or digestive tract. Exposure by any route (oral, dermal, inhalation) can cause effects on the heart and nervous system including changes in heart rate, blood pressure, respiration, as well as tremors and lung disorders, possibly resulting in death. Chronic dermal exposure can cause digestive disturbances, liver and kidney damage. Ingestion of phenol may also
cause damage to the liver and muscle fibers and gastrointestinal, circulatory and urinary systems. Phenol produced
toxic effects in laboratory animals as well as damage to the thymus and spleen after ingestion. Chronic ingestion
cause a decrease in red blood cell numbers and a decrease in immune response. Chronic inhalation in laboratory
animals caused liver and kidney damage. Phenol was clastogenic in several in vivo and in vitro screening tests. The
AMES mutation showed no mutagenic effects. Teratogenic effects were seen in animal studies. No carcinogenic
effects were observed.

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.

⚠️WARNING: Cancer – 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

<table>
<thead>
<tr>
<th>Component / CAS No.</th>
<th>Toxicity to Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea P/W formaldehyde, isobutylated (68002-18-6)</td>
<td>Not available</td>
</tr>
<tr>
<td>Isobutanol (78-83-1)</td>
<td>LC50 1120 - 1520 mg/L - Oncorhynchus mykiss (96h)</td>
</tr>
<tr>
<td></td>
<td>LC50 1370 - 1670 mg/L - Pimephales promelas (96h)</td>
</tr>
<tr>
<td></td>
<td>LC50 1480 - 1730 mg/L - Lepomis macrochirus</td>
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<tr>
<td>Component / CAS No.</td>
<td>Toxicity to Water Flea</td>
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<tr>
<td>Urea P/W formaldehyde, isobutylated (68002-18-6)</td>
<td>Not available</td>
</tr>
<tr>
<td>Isobutanol (78-83-1)</td>
<td>EC50 = 1300 mg/L - Daphnia magna (48h)</td>
</tr>
<tr>
<td>Butanol (71-36-3)</td>
<td>EC50 = 1983 mg/L - Daphnia magna (48h)</td>
</tr>
<tr>
<td>Phenol (108-95-2)</td>
<td>EC50 = 3.1 mg/L - Daphnia magna (48h)</td>
</tr>
<tr>
<td>NOEC = 0.16 mg/L - Daphnia magna (16d)</td>
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<tr>
<td>Formaldehyde (50-00-0)</td>
<td>EC50 = 5.8 mg/L - Daphnia pulex (48h)</td>
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<table>
<thead>
<tr>
<th>Component / CAS No.</th>
<th>Toxicity to Algae</th>
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<tr>
<td>Urea P/W formaldehyde, isobutylated (68002-18-6)</td>
<td>Not available</td>
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<tr>
<td>Isobutanol (78-83-1)</td>
<td>EC50 = 230 mg/L - Desmodesmus subspicatus (48h)</td>
</tr>
<tr>
<td>Butanol (71-36-3)</td>
<td>EC50 &gt; 500 mg/L - Desmodesmus subspicatus (72h)</td>
</tr>
<tr>
<td>Phenol (108-95-2)</td>
<td>EC50 = 61.1 mg/L - Pseudokirchnerella subcapitata (96hrs)</td>
</tr>
<tr>
<td>Formaldehyde (50-00-0)</td>
<td>EC50 = 4.89 mg/L - Desmodesmus subspicatus (72hrs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component / CAS No.</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea P/W formaldehyde, isobutylated (68002-18-6)</td>
<td>Not available</td>
</tr>
<tr>
<td>Isobutanol (78-83-1)</td>
<td>0.79</td>
</tr>
<tr>
<td>Butanol (71-36-3)</td>
<td>0.785</td>
</tr>
<tr>
<td>Phenol (108-95-2)</td>
<td>1.5</td>
</tr>
<tr>
<td>Formaldehyde (50-00-0)</td>
<td>0.35</td>
</tr>
</tbody>
</table>

### 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: FLAMMABLE LIQUID, CORROSIVE, N.O.S.
Hazard Class: 3
Subsidiary Class: 8
Packing Group: III
UN/ID Number: UN2924
Transport Label Required: Flammable Liquid
Corrosive
TECHNICAL NAME (N.O.S.): BUTANOLS, PHENOL

Component / CAS No. | Hazardous Substances/Reportable Quantity of Product (lbs)
-------------------|--------------------------------------------------
Isobutanol         | 38461
Butanol            | 38461
Phenol             | 25000
Formaldehyde       | 14492

Comments: Flammable liquids with a flash point at or above 38° C (100° F) and not meeting the definition of any other hazard class may be reclassed as a Combustible liquid except for transport by vessel or aircraft. If reclassed, these Combustible liquids are not regulated in non-bulk packagings.

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: FLAMMABLE LIQUID, CORROSIVE, N.O.S.
Hazard Class: 3
Subsidiary Class: 8
Packing Group: III
UN Number: UN2924
Transport Label Required: Flammable Liquid
Corrosive
TECHNICAL NAME (N.O.S.): BUTANOLS, PHENOL

ICAO / IATA

Dangerous Goods? X

UN PROPER SHIPPING NAME: FLAMMABLE LIQUID, CORROSIVE, N.O.S.
Transport Hazard Class: 3
Subsidiary Class: 8
Packing Group: III
UN Number: UN2924
Transport Label Required: Flammable Liquid
Corrosive
TECHNICAL NAME (N.O.S.): BUTANOL, PHENOL
IMO

Dangerous Goods? X
UN PROPER SHIPPING NAME: FLAMMABLE LIQUID, CORROSIVE, N.O.S.
Transport Hazard Class: 3
Subsidiary Class: 8
UN Number: UN2924
Packing Group: III
Transport Label Required: Flammable Liquid
Corrosive
TECHNICAL NAME (N.O.S.): BUTANOL, PHENOL

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 included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory. This product contains a chemical substance that is subject to export notification under Section 12 (b) of the Toxic Substances Control Act, 15 U. S. C. 2601 et. seq. (This requirement applies to exports from the United States only.) This material is subject to Significant New Use Rule (SNUR) 40 CFR Section 721.5908.

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 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 Chemical Substances (AICS) or are not required to be listed on AICS.

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: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean 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.

<table>
<thead>
<tr>
<th>Component / CAS No.</th>
<th>%</th>
<th>TPQ (lbs)</th>
<th>RQ (lbs)</th>
<th>S313</th>
<th>TSCA 12B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isobutanol 78-83-1</td>
<td>~ 13</td>
<td>None</td>
<td>5000</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Butanol 71-36-3</td>
<td>~ 13</td>
<td>None</td>
<td>5000</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Formaldehyde 50-00-0</td>
<td>&lt; 0.7</td>
<td>500</td>
<td>100</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Phenol 108-95-2</td>
<td>~ 4</td>
<td>500</td>
<td>1000</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

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

**Physical Hazards**
- Flammable (gases, aerosols, liquids, or solids)

**Health Hazards**
- Carcinogenicity
- Acute toxicity (any route of exposure)
- Skin Corrosion or Irritation
- Respiratory or Skin Sensitization
- Serious eye damage or eye irritation
- Specific target organ toxicity (single or repeated exposure)
- Germ cell mutagenicity

### 16. OTHER INFORMATION

**NFPA Hazard Rating (National Fire Protection Association)**
- Health: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
- Fire: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.
- Instability: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

**Reasons For Issue:** Revised Section 11

**Date Prepared:** 08/25/2018
**Date of last significant revision:** 08/07/2015

**Component - Hazard Statements**
- Urea P/W formaldehyde, isobutylated
  - H413 - May cause long lasting harmful effects to aquatic life.
- Isobutanol
  - H226 - Flammable liquid and vapor.
  - H315 - Causes skin irritation.
  - H318 - Causes serious eye damage.
  - H335 - May cause respiratory irritation.
  - H336 - May cause drowsiness or dizziness.
- 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.

Phenol
H227 - Combustible liquid.
H301 - Toxic if swallowed.
H311 - Toxic in contact with skin.
H314 - Causes severe skin burns and eye damage.
H331 - Toxic if inhaled.
H341 - Suspected of causing genetic defects.
H373 - May cause damage to organs through prolonged or repeated exposure.
H401 - Toxic to aquatic life.
H411 - Toxic 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(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 (Suarans 24)
Chile: +56 2 2582 9336 (Carechem 24)
Mexico and all others: +52-555-004-8763 (Carechem 24)