ANGUS CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: CORRGUARD® EXT Amino Alcohol

Manufacturer or supplier's details
Company name of supplier: ANGUS CHEMICAL COMPANY

Address: 1500 E. LAKE COOK ROAD
          Buffalo Grove IL 60089-6553

Customer Information Number: 844-474-9969

E-mail address: NAR_CC@ANGUS.COM

Emergency telephone number: 800-424-9300

Recommended use of the chemical and restrictions on use
Recommended use: Metal working fluids.
For industrial use only.
The ANGUS Chemical Company recommends that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact the Customer Information Group (see Section 1 of this data sheet).

2. HAZARDS IDENTIFICATION

GHS Classification
Acute toxicity (Oral): Category 4
Serious eye damage: Category 1
Product name: CORRGUARD® EXT Amino Alcohol

Issue Date: 11/02/2017

Skin corrosion Category 1

GHS Label elements, including precautionary statements

Hazard pictograms

Signal word Danger

Hazard statements Harmful if swallowed.
Causes severe skin burns and eye damage.

Precautionary statements

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

Response:
IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
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.
Wash contaminated clothing before reuse.

Storage: Store locked up.

Disposal: Dispose of contents/ container to an approved waste disposal plant.

Other hazards
None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Amino-4-octanol</td>
<td>1001354-72-8</td>
<td>&gt;= 80.0 %</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>15.0%</td>
</tr>
<tr>
<td>Impurities (Not available)</td>
<td>Not Assigned</td>
<td>&lt;= 3.0 %</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

If inhaled
Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

In case of skin contact
Immediate continued and thorough washing in flowing water for at least 30 minutes is imperative while removing contaminated clothing. Prompt medical consultation is essential. Wash clothing before reuse. Properly dispose of leather items such as shoes, belts, and watchbands. Suitable emergency safety shower facility should be immediately available.

In case of eye contact
Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

If swallowed
Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.

Most important symptoms and effects, both acute and delayed
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Protection of first-aiders
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to physician
If burn is present, treat as any thermal burn, after decontamination. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. No specific antidote. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. Maintain adequate ventilation and oxygenation of the patient. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist.

5. FIREFIGHTING MEASURES
Suitable extinguishing media

- Water fog or fine spray.
- Carbon dioxide fire extinguishers.
- Dry chemical fire extinguishers.
- Foam.
- Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Specific hazards during firefighting

Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Hazardous combustion products

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to:
- Carbon dioxide.
- Carbon monoxide.
- Nitrogen oxides.

Further information

Keep people away. Isolate fire and deny unnecessary entry. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Burning liquids may be extinguished by dilution with water.

Special protective equipment for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Keep upwind of spill.
- Ventilate area of leak or spill.
- Only trained and properly protected personnel must be involved in clean-up operations.
- Evacuate area.
- Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
- Refer to section 7, Handling, for additional precautionary measures.

Environmental precautions

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up

- Contain spilled material if possible.
- Absorb with materials such as:
  - Sand.
- Collect in suitable and properly labeled containers.
See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Advice on safe handling
Avoid breathing mist.
Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.
Do not swallow.
Wash thoroughly after handling.
Use with adequate ventilation.
Do not get in eyes, on skin, on clothing.
Keep container closed.
See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage
Store in a dry place.
Avoid moisture.
Store in original container.
Keep containers tightly closed when not in use to prevent formation of carbonate salts.
Do not store in:
Zinc.
Aluminum.
Copper.
Copper alloys.
Galvanized containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters
Contains no substances with occupational exposure limit values.

Engineering measures
Local exhaust ventilation may be necessary for some operations.
Use engineering controls to maintain airborne level below exposure limit requirements or guidelines.
If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation.

Personal protective equipment
Respiratory protection
Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process.
In misty atmospheres, use an approved particulate respirator.
Use the following CE approved air-purifying respirator:
Organic vapor cartridge with a particulate pre-filter, type AP2.
Hand protection

Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Chlorinated polyethylene. Neoprene. Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Examples of acceptable glove barrier materials include: Viton. Nitrile/butadiene rubber ("nitrile" or "NBR"). Avoid gloves made of: Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Eye protection

Use chemical goggles.

Skin and body protection

Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless to yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Amine.</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No test data available</td>
</tr>
<tr>
<td>pH</td>
<td>11.2</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>-3 °C (27 °F)</td>
</tr>
<tr>
<td>Freezing point</td>
<td>-3 °C (27 °F)</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>218 °C (424 °F)</td>
</tr>
<tr>
<td>Flash point</td>
<td>132 °C (270 °F)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No test data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Method: Measured
1% aqueous solution.

Method: Measured

Method: Measured

Method: Measured

Method: Measured

Method: Setaflash Closed Cup ASTM D3828
Test Type: closed cup
### 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No data available.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under recommended storage conditions. See Storage, Section 7.</td>
</tr>
</tbody>
</table>

**NOTE:** The physical data presented above are typical values and should not be construed as a specification.
Possibility of hazardous reactions
Polymerization will not occur.

Conditions to avoid
Exposure to elevated temperatures can cause product to decompose.
Product absorbs carbon dioxide from the air.
Reaction with carbon dioxide may form carbonate salts.

Incompatible materials
Avoid contact with:
- Strong acids
- Strong Oxidizers
Avoid contact with metals such as:
- aluminum
- Brass
- Copper
- Copper alloys
- Galvanized metals
- Zinc
Avoid unintended contact with:
- Halogenated hydrocarbons

Hazardous decomposition products
Decomposition products depend upon temperature, air supply and the presence of other materials.

### 11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

**Acute toxicity**

**Product:**

**Acute oral toxicity**
Remarks: Low toxicity if swallowed.
Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
Swallowing may result in irritation or burns of the mouth, throat, and gastrointestinal tract.

**Acute inhalation toxicity**
Remarks: At room temperature, exposure to vapor is minimal due to low volatility.
Mist may cause severe irritation of upper respiratory tract (nose and throat).
Remarks: The LC50 has not been determined.

**Acute dermal toxicity**
Remarks: Prolonged or widespread skin contact may result in absorption of harmful amounts.
Absorption has not been determined due to corrosivity.
Remarks: The dermal LD50 has not been determined.

**Components:**

**3-Amino-4-octanol**

**Acute oral toxicity**
LD50 (Rat, female): 550 mg/kg
Method: OECD 425 or equivalent

### Acute inhalation toxicity

Remarks: As product:
The LC50 has not been determined.

### Acute dermal toxicity

Remarks: The dermal LD50 has not been determined.

### Skin corrosion/irritation

**Product:**
Result: Causes burns.
Remarks: Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage.

Remarks: Classified as corrosive to the skin according to DOT guidelines.

**Components:**
3-Amino-4-octanol

Result: Causes burns.
Remarks: Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage.

Remarks: Classified as corrosive to the skin according to DOT guidelines.

### Serious eye damage/eye irritation

**Product:**
Remarks: Due to the effects of the material on the skin, it is assumed that exposure may cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness.

**Components:**
3-Amino-4-octanol

Result: Corrosive
Remarks: Due to the effects of the material on the skin, it is assumed that exposure may cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness.

### Respiratory or skin sensitization

**Product:**
Assessment: Does not cause skin sensitization.
Remarks: Did not cause allergic skin reactions when tested in guinea pigs.

Remarks: For respiratory sensitization:
No relevant data found.

**Components:**
3-Amino-4-octanol

Remarks: For skin sensitization:
Did not cause allergic skin reactions when tested in guinea pigs.
Remarks: For respiratory sensitization:
No relevant data found.

Carcinogenicity

Product:
No relevant data found.

Components:
3-Amino-4-octanol
No relevant data found.

IARC
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Teratogenicity

Product
Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Components:
3-Amino-4-octanol
Did not cause birth defects or any other fetal effects in laboratory animals.

Mutagenicity

Product
Animal genetic toxicity studies were negative.
In vitro genetic toxicity studies were negative.

Components:
3-Amino-4-octanol
Animal genetic toxicity studies were negative.
In vitro genetic toxicity studies were negative.

Reproductive toxicity

Product:
In animal studies, did not interfere with reproduction.

Components:
3-Amino-4-octanol

In animal studies, did not interfere with reproduction.

**STOT - single exposure**

**Product:**
Assessment: Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Components:**
3-Amino-4-octanol

Assessment: Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.

**Repeated dose toxicity**

**Product:**
Remarks: In animals, effects have been reported on the following organs: Liver.

**Components:**
3-Amino-4-octanol

Remarks: In animals, effects have been reported on the following organs: Liver.

**Aspiration toxicity**

**Product:**
Based on available information, aspiration hazard could not be determined.

**Components:**
3-Amino-4-octanol

Based on available information, aspiration hazard could not be determined.

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Product:**
Toxicity to fish

Remarks: Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

LC50 (Oncorhynchus mykiss (rainbow trout)): 68 mg/L
Exposure time: 96.0 h
Test Type: static test
Toxicity to daphnia and other aquatic invertebrates

**EC50** (Daphnia magna (Water flea)): 44.00 mg/l
Exposure time: 48.0 h
Test Type: static test
Method: OECD Test Guideline 202 or Equivalent
GLP: yes

Toxicity to algae

**EyC50** (Pseudokirchneriella subcapitata (green algae)): 5.4 mg/l
End point: Growth inhibition (cell density reduction)
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201 or Equivalent
GLP: yes

**ErC50** (Pseudokirchneriella subcapitata (green algae)): 58 mg/l
End point: Growth inhibition (cell density reduction)
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201 or Equivalent
GLP: yes

**Components:**

**3-Amino-4-octanol**

Toxicity to fish

Remarks: Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

**LC50** (Oncorhynchus mykiss (rainbow trout)): 68 mg/l
Exposure time: 96.0 h
Test Type: static test
Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 44.00 mg/l
Exposure time: 48.0 h
Test Type: static test
Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae

**ErC50** (Pseudokirchneriella subcapitata (green algae)): 58 mg/l
End point: Growth inhibition (cell density reduction)
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201 or Equivalent

**Persistence and degradability**

**Product:**

**Biodegradability**

Result: Readily biodegradable
Remarks: Material is expected to be readily biodegradable.

Test Type: aerobic
Concentration: 36.6 mg/l
Biodegradation: 100 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent
Remarks: 10-day Window: Pass

**Components:**
3-Amino-4-octanol

Biodegradability
Result: Readily biodegradable
Remarks: Material is expected to be readily biodegradable.

aerobic
Concentration: 36.6 mg/l
Biodegradation: 100 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent
Remarks: 10-day Window: Pass

**Bioaccumulative potential**

**Product:**
Bioaccumulation
Bioconcentration factor (BCF): 2.8
Method: Estimated.

Partition coefficient: n-octanol/water
log Pow: 1.3 (25 °C)
Method: Estimated.
GLP: yes
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Active ingredient

**Components:**
3-Amino-4-octanol

Bioaccumulation
Species: Fish.
Bioconcentration factor (BCF): 2.8
Method: Estimated.

Partition coefficient: n-octanol/water
log Pow: 1.3 (25 °C)
Method: Estimated.
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Mobility in soil**

**Product:**
Distribution among environmental compartments
Koc: < 3
Method: OECD 121: HPLC Method
Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

**Components:**
3-Amino-4-octanol
Distribution among environmental compartments

- Koc: < 3
- Method: OECD 121: HPLC Method
- Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

Other adverse effects

**Product:**

- Results of PBT and vPvB assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

- Ozone-Depletion Potential: Remarks: no data available

**Components:**

3-Amino-4-octanol

- Results of PBT and vPvB assessment: Non-classified vPvB substance Non-classified PBT substance
- Ozone-Depletion Potential: Remarks: no data available

### 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

- **Waste from residues:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.
  - All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations.
  - Regulations may vary in different locations.
  - Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.
  - THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information.
  - FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. Landfill.
  - ANGUS HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL.

### 14. TRANSPORT INFORMATION

**International Regulation**

- **IATA-DGR**
  - UN/ID No.: UN 2735
  - Proper shipping name: Amines, liquid, corrosive, n.o.s.
<table>
<thead>
<tr>
<th>Class</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>Labels</td>
<td>Corrosive</td>
</tr>
<tr>
<td>Packing instruction (cargo aircraft)</td>
<td>855</td>
</tr>
<tr>
<td>Packing instruction (passenger aircraft)</td>
<td>851</td>
</tr>
</tbody>
</table>

**IMDG-Code**

- **UN number**: UN 2735
- **Proper shipping name**: AMINES, LIQUID, CORROSIVE, N.O.S. (3-Amino-4-octanol)
- **Class**: 8
- **Packing group**: II
- **Labels**: Class 8 - Corrosive
- **ERG Code**: 153
- **Marine pollutant**: no
- **Remarks**: Stowage category A

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations**

**49 CFR (DOT) – NON BULK**

- **UN/ID/NA number**: 2735
- **Proper shipping name**: AMINES, LIQUID, CORROSIVE, N.O.S.

**Class** | 8  
**Packing group** | II  
**Labels** | Class 8 - Corrosive  
**ERG Code** | 153  
**Marine pollutant** | no  

**49 CFR (DOT) - BULK**

- **UN/ID/NA number**: 2735
- **Proper shipping name**: AMINES, LIQUID, CORROSIVE, N.O.S. (3-Amino-4-octanol)

**Class** | 8  
**Packing group** | II  
**Labels** | Class 8 - Corrosive  
**ERG Code** | 153  
**Marine pollutant** | no  

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.
15. REGULATORY INFORMATION

OSHA Hazards
This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Corrosive to skin, Harmful by ingestion.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards
Acute Health Hazard
Chronic Health Hazard
No SARA Hazards

SARA 302
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC’s (40 CFR 60.489).

Clean Water Act
This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know
The following chemicals are listed because of the additional requirements of Pennsylvania law:

<table>
<thead>
<tr>
<th>Cas No.</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001354-72-8</td>
<td>3-Amino-4-octanol</td>
</tr>
</tbody>
</table>

Pennsylvania Right To Know
The following chemicals are listed because of the additional requirements of Pennsylvania law:

<table>
<thead>
<tr>
<th>Cas No.</th>
<th>Component</th>
</tr>
</thead>
</table>
New Jersey Right To Know
The following chemicals are listed because of the additional requirements of New Jersey law:

<table>
<thead>
<tr>
<th>Cas No.</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001354-72-8</td>
<td>3-Amino-4-octanol</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>Water</td>
</tr>
<tr>
<td></td>
<td>Impurities</td>
</tr>
</tbody>
</table>

New Jersey Right To Know
The following chemicals are listed because of the additional requirements of New Jersey law:

<table>
<thead>
<tr>
<th>Cas No.</th>
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<td>Water</td>
</tr>
<tr>
<td></td>
<td>Impurities</td>
</tr>
</tbody>
</table>

California Prop. 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

United States TSCA Inventory
All Components OK
16. OTHER INFORMATION

Further information

NFPA:

Flammability

Health

11

33

00

Special hazard.

HMIS III:

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>3</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>0</td>
</tr>
</tbody>
</table>

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

Revision Date: 11/02/2017
Version: 0.0
Identification Number: 000040000023

US / EN

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Full text of other abbreviations

(Q)SAR - (Quantitative) Structure Activity Relationship; ASTM - American Society for the Testing of Materials; bw - Body weight; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying
Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50% of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EHS - Extremely Hazardous Substance; HMIS - Hazardous Materials Identification System; MSHA - Mine Safety and Health Administration; NFPA - National Fire Protection Association; RCRA - Resource Conservation and Recovery Act; RQ - Reportable Quantity; SARA - Superfund Amendments and Reauthorization Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice; ERG - Emergency Response Guide; NTP - National Toxicology Program; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods