



**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray  
 Wash face, hands and any exposed skin thoroughly after handling  
 Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 Immediately call a poison center or doctor/physician  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse  
 If skin irritation persists: Get medical advice/attention  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Immediately call a poison center or doctor/physician  
 IF SWALLOWED: Call a poison center or doctor/physician  
 Rinse mouth  
 Do not induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other Hazards**

Harmful to aquatic life with long lasting effects

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name       | CAS No      | Weight-% |
|---------------------|-------------|----------|
| Potassium hydroxide | 1310-58-3   | 5-10     |
| Ethanolamine        | 141-43-5    | <5       |
| Trade Secret        | Proprietary | <5       |

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

### 4. FIRST-AID MEASURES

**First Aid Measures**

|                     |   |
|---------------------|---|
| <b>Eye Contact</b>  | 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.    |
| <b>Skin Contact</b> | Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If irritation persists, seek medical attention. |
| <b>Inhalation</b>   | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.                                    |
| <b>Ingestion</b>    | Rinse mouth. Give large volumes of water. Do not induce vomiting. Get medical attention.  |

**Most important symptoms and effects**

|                 |  |
|-----------------|--|
| <b>Symptoms</b> | Causes severe skin burns and eye damage. Ingestion will cause severe damage to the mouth, throat, esophagus, and stomach. Inhalation of mist may be irritating to respiratory tract. |
|-----------------|--|

**Indication of any immediate medical attention and special treatment needed**

|                           |                        |
|---------------------------|------------------------|
| <b>Notes to Physician</b> | Treat symptomatically. |
|---------------------------|------------------------|

## 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Not determined.

### Specific Hazards Arising from the Chemical

Product is not flammable.

### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions** Use personal protection recommended in Section 8.

**Environmental Precautions** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

### Methods and material for containment and cleaning up

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Clean-Up** If product leaks or spills, flood area with water, mop up and dispose to sanitary sewer. Product may be neutralized with vinegar.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on Safe Handling** Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Use only in well-ventilated areas. Do not destroy or deface the label.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep container tightly closed and store in a cool, dry and well-ventilated place. Store containers upright. Store locked up.

**Incompatible Materials** Strong acids. Attacks aluminum and galvanized metals.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

| Chemical Name                    | ACGIH TLV                    | OSHA PEL                               | NIOSH IDLH                   |
|----------------------------------|------------------------------|--|------------------------------|
| Potassium hydroxide<br>1310-58-3 | Ceiling: 2 mg/m <sup>3</sup> | (vacated) Ceiling: 2 mg/m <sup>3</sup> | Ceiling: 2 mg/m <sup>3</sup> |

|                          |                           |   |   |
|--------------------------|---------------------------|---|---|
| Ethanolamine<br>141-43-5 | STEL: 6 ppm<br>TWA: 3 ppm | TWA: 3 ppm<br>TWA: 6 mg/m <sup>3</sup><br>(vacated) TWA: 3 ppm<br>(vacated) TWA: 8 mg/m <sup>3</sup><br>(vacated) STEL: 6 ppm<br>(vacated) STEL: 15 mg/m <sup>3</sup> | IDLH: 30 ppm<br>TWA: 3 ppm<br>TWA: 8 mg/m <sup>3</sup><br>STEL: 6 ppm<br>STEL: 15 mg/m <sup>3</sup> |
|--------------------------|---------------------------|---|---|

**Appropriate engineering controls**

**Engineering Controls** Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Goggles.  
**Skin and Body Protection** Rubber gloves.  
**Respiratory Protection** Use in well-ventilated area.  
**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

|                       |                    |                       |                |
|-----------------------|--------------------|-----------------------|----------------|
| <b>Physical State</b> | Liquid             | <b>Odor</b>           | Bland          |
| <b>Appearance</b>     | Dark yellow liquid | <b>Odor Threshold</b> | Not determined |
| <b>Color</b>          | Dark yellow        |                       |                |

| <b>Property</b>                     | <b>Values</b>         | <b>Remarks • Method</b>          |
|-------------------------------------|-----------------------|----------------------------------|
| <b>pH</b>                           | 12.5 - 13.5           |                                  |
| <b>Melting Point/Freezing Point</b> | Not applicable        |                                  |
| <b>Boiling Point/Boiling Range</b>  | Not determined        |                                  |
| <b>Flash Point</b>                  | 100 °C / 212 °F       | Pensky-Martens Closed Cup (PMCC) |
| <b>Evaporation Rate</b>             | Not determined        |                                  |
| <b>Flammability (Solid, Gas)</b>    | Liquid-Not applicable |                                  |
| <b>Upper Flammability Limits</b>    | Not determined        |                                  |
| <b>Lower Flammability Limit</b>     | Not determined        |                                  |
| <b>Vapor Pressure</b>               | Not applicable        |                                  |
| <b>Vapor Density</b>                | Not determined        |                                  |
| <b>Specific Gravity</b>             | 1.09                  | (Water = 1)                      |
| <b>Water Solubility</b>             | Completely soluble    |                                  |
| <b>Solubility in other solvents</b> | Not determined        |                                  |
| <b>Partition Coefficient</b>        | Not determined        |                                  |
| <b>Auto-ignition Temperature</b>    | Not determined        |                                  |
| <b>Decomposition Temperature</b>    | Not determined        |                                  |
| <b>Kinematic Viscosity</b>          | Not determined        |                                  |
| <b>Dynamic Viscosity</b>            | Not determined        |                                  |
| <b>Explosive Properties</b>         | Not determined        |                                  |
| <b>Oxidizing Properties</b>         | Not determined        |                                  |

## 10. STABILITY AND REACTIVITY

**Reactivity**

Not reactive under normal conditions.

**Chemical Stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to Avoid**

Keep separated from incompatible substances. Keep out of reach of children.

**Incompatible Materials**

Strong acids. Attacks aluminum and galvanized metals.

**Hazardous Decomposition Products**

None known based on information supplied.

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure****Product Information**

|                     |                                  |
|---------------------|----------------------------------|
| <b>Eye Contact</b>  | Causes severe eye damage.        |
| <b>Skin Contact</b> | Causes severe skin burns.        |
| <b>Inhalation</b>   | Avoid breathing vapors or mists. |
| <b>Ingestion</b>    | May be harmful if swallowed.     |

**Component Information**

| Chemical Name                    | Oral LD50             | Dermal LD50                                     | Inhalation LC50 |
|----------------------------------|-----------------------|---|-----------------|
| Trade Secret                     | = 20000 mg/kg ( Rat ) | = 20800 mg/kg ( Rabbit )                        | -               |
| Trade Secret                     | = 1378 mg/kg ( Rat )  | > 2 g/kg ( Rabbit )                             | -               |
| Potassium hydroxide<br>1310-58-3 | = 214 mg/kg ( Rat )   | -   | -               |
| Ethanolamine<br>141-43-5         | = 1720 mg/kg ( Rat )  | = 1 mL/kg ( Rabbit ) = 1025 mg/kg<br>( Rabbit ) | -               |
| Trade Secret                     | = 10 g/kg ( Rat )     | -   | -               |

**Information on physical, chemical and toxicological effects**

**Symptoms** Please see section 4 of this SDS for symptoms.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Carcinogenicity** Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Numerical measures of toxicity**

Not determined

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Harmful to aquatic life with long lasting effects.

**Component Information**

| Chemical Name | Algae/aquatic plants  | Fish  | Toxicity to microorganisms | Crustacea  |
|---------------|---|---|----------------------------|--|
| Trade Secret  | 19000: 96 h<br>Pseudokirchneriella<br>subcapitata mg/L EC50 | 51600: 96 h Oncorhynchus<br>mykiss mg/L LC50 static 41 -<br>47: 96 h Oncorhynchus<br>mykiss mL/L LC50 static<br>51400: 96 h Pimephales<br>promelas mg/L LC50 static<br>710: 96 h Pimephales<br>promelas mg/L LC50 |                            | 10000: 24 h Daphnia magna<br>mg/L EC50 1000: 48 h<br>Daphnia magna mg/L EC50<br>Static |

|                                  |   |   |  |  |
|----------------------------------|---|---|--|--|
| Potassium hydroxide<br>1310-58-3 |   | 80: 96 h <i>Gambusia affinis</i><br>mg/L LC50 static  |  |  |
| <b>Chemical Name</b>             | <b>Algae/aquatic plants</b>                         | <b>Fish</b>   | <b>Toxicity to microorganisms</b>  | <b>Crustacea</b>                         |
| Ethanolamine<br>141-43-5         | 15: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50   | 227: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 3684: 96 h <i>Brachydanio rerio</i> mg/L LC50 static 300 - 1000: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 114 - 196: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static 200: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through | EC50 = 110 mg/L 17 h<br>EC50 = 12200 mg/L 2 h<br>EC50 = 13.7 mg/L 30 min | 65: 48 h <i>Daphnia magna</i> mg/L EC50  |
| Trade Secret                     | 1.01: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50 | 41: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 59.8: 96 h <i>Pimephales promelas</i> mg/L LC50 static   |  | 610: 24 h <i>Daphnia magna</i> mg/L EC50 |

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

| Chemical Name                    | Partition Coefficient |
|----------------------------------|-----------------------|
| Potassium hydroxide<br>1310-58-3 | 0.83                  |
| Ethanolamine<br>141-43-5         | -1.91                 |

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**California Hazardous Waste Status**

| Chemical Name                    | California Hazardous Waste Status |
|----------------------------------|-----------------------------------|
| Potassium hydroxide<br>1310-58-3 | Toxic<br>Corrosive                |

## 14. TRANSPORT INFORMATION

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

### **DOT**

**UN/ID No** UN3266  
**Proper Shipping Name** Corrosive liquid, basic, inorganic, n.o.s. (Potassium hydroxide)  
**Hazard Class** 8  
**Packing Group** II

### **IATA**

**UN/ID No** UN3266  
**Proper Shipping Name** Corrosive liquid, basic, inorganic, n.o.s. (Potassium hydroxide)  
**Hazard Class** 8  
**Packing Group** II

### **IMDG**

**UN/ID No** UN3266  
**Proper Shipping Name** Corrosive liquid, basic, inorganic, n.o.s. (Potassium hydroxide)  
**Hazard Class** 8  
**Packing Group** II  
**Marine Pollutant** This material may meet the definition of a marine pollutant

## 15. REGULATORY INFORMATION

### **International Inventories**

| Chemical Name       | TSCA    | DSL | NDSL | EINECS  | ELINCS | ENCS    | IECSC | KECL    | PICCS | AICS |
|---------------------|---------|-----|------|---------|--------|---------|-------|---------|-------|------|
| Potassium hydroxide | Present | X   |      | Present |        | Present | X     | Present | X     | X    |
| Ethanolamine        | Present | X   |      | Present |        | Present | X     | Present | X     | X    |
| Trade Secret        | Present | X   |      | Present |        | Present | X     | Present | X     | X    |

#### **Legend:**

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

*DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*

*EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

*ENCS - Japan Existing and New Chemical Substances*

*IECSC - China Inventory of Existing Chemical Substances*

*KECL - Korean Existing and Evaluated Chemical Substances*

*PICCS - Philippines Inventory of Chemicals and Chemical Substances*

*AICS - Australian Inventory of Chemical Substances*

### **US Federal Regulations**

### **CERCLA**

| Chemical Name                    | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ)                  |
|----------------------------------|--------------------------|----------------|---|
| Potassium hydroxide<br>1310-58-3 | 1000 lb                  |                | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**CWA (Clean Water Act)**

| Chemical Name       | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Potassium hydroxide | 1000 lb                     |                        |                           | X                          |

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Chemical Name                    | New Jersey | Massachusetts | Pennsylvania |
|----------------------------------|------------|---------------|--------------|
| Trade Secret                     | X          |               | X            |
| Potassium hydroxide<br>1310-58-3 | X          | X             | X            |
| Ethanolamine<br>141-43-5         | X          | X             | X            |

**16. OTHER INFORMATION**

|             |   |                                       |                                      |  |
|-------------|---|---------------------------------------|--------------------------------------|--|
| <b>NFPA</b> | <b>Health Hazards</b><br>Not determined | <b>Flammability</b><br>Not determined | <b>Instability</b><br>Not determined | <b>Special Hazards</b><br>Not determined |
| <b>HMS</b>  | <b>Health Hazards</b><br>2              | <b>Flammability</b><br>0              | <b>Physical Hazards</b><br>2         | <b>Personal Protection</b><br>B          |

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**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**