SAFETY DATA SHEET

Geraldine Stripper

Section 1. Identification

GHS product identifier: Geraldine Stripper
Other means of identification: Not available.
Product type: Liquid.

Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Supplier's details: Betco Corporation
400 Van Camp Road
Toledo, Ohio 43402
www.betco.com
888-462-3826

Emergency telephone number (with hours of operation): Chemtrec (800) 424-9300 24 hour

Section 2. Hazards identification

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture: SKIN CORROSION - Category 1
SERIOUS EYE DAMAGE - Category 1

GHS label elements
Hazard pictograms:

Signal word: Danger
Hazard statements: Causes severe skin burns and eye damage.
Precautionary statements
Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or 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 physician.
Storage: Store locked up.
Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazard not otherwise classified: None known.

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1/13
Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium hydroxide</td>
<td>≥3 - &lt;5</td>
<td>1310-73-2</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>≥3 - &lt;5</td>
<td>111-76-2</td>
</tr>
<tr>
<td>2-aminoethanol</td>
<td>≥1 - &lt;3</td>
<td>141-43-5</td>
</tr>
<tr>
<td>Silicic acid, sodium salt</td>
<td>≥1 - &lt;3</td>
<td>1344-09-8</td>
</tr>
<tr>
<td>Fatty acids, tall-oil, sodium salts</td>
<td>≥1 - &lt;3</td>
<td>61790-45-2</td>
</tr>
<tr>
<td>sodium xylenesulphonate</td>
<td>≥1 - &lt;3</td>
<td>1300-72-7</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

**Description of necessary first aid measures**

**Eye contact**: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

**Inhalation**: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact**: Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

**Eye contact**: Causes serious eye damage.

**Inhalation**: No known significant effects or critical hazards.

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Section 4. First aid measures

Skin contact: Causes severe burns.
Ingestion: No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

Eye contact: Adverse symptoms may include the following:
- pain
- watering
- redness

Inhalation: No specific data.
Skin contact: Adverse symptoms may include the following:
- pain or irritation
- redness
- blistering may occur

Ingestion: Adverse symptoms may include the following:
- stomach pains

**Notes to physician**

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments**

No specific treatment.

**Protection of first-aiders**

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**Indication of immediate medical attention and special treatment needed, if necessary**

See toxicological information (Section 11)

Section 5. Fire-fighting measures

**Extinguishing media**

- Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media: None known.

**Specific hazards arising from the chemical**

- In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous thermal decomposition products**

- Decomposition products may include the following materials:
  - carbon dioxide
  - carbon monoxide
  - nitrogen oxides
  - sulfur oxides
  - metal oxide/oxides

**Special protective actions for fire-fighters**

- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters**

- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

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## Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
| sodium hydroxide | ACGIH TLV (United States, 4/2014).  
C: 2 mg/m³  
CEIL: 2 mg/m³  
NIOSH REL (United States, 10/2013).  
CEIL: 2 mg/m³  
OSHA PEL (United States, 2/2013).  
TWA: 2 mg/m³ 8 hours.  
Absorbed through skin.  
TWA: 25 ppm 8 hours.  
TWA: 120 mg/m³ 8 hours.  
NIOSH REL (United States, 10/2013).  
Absorbed through skin.  
TWA: 5 ppm 10 hours.  
TWA: 24 mg/m³ 10 hours.  
ACGIH TLV (United States, 3/2015).  
TWA: 20 ppm 8 hours.  
OSHA PEL (United States, 2/2013).  
Absorbed through skin.  
TWA: 50 ppm 8 hours.  
TWA: 240 mg/m³ 8 hours. |
Absorbed through skin.  
TWA: 25 ppm 8 hours.  
TWA: 120 mg/m³ 8 hours.  
NIOSH REL (United States, 10/2013).  
Absorbed through skin.  
TWA: 5 ppm 10 hours.  
TWA: 24 mg/m³ 10 hours.  
ACGIH TLV (United States, 3/2015).  
TWA: 20 ppm 8 hours.  
OSHA PEL (United States, 2/2013).  
Absorbed through skin.  
TWA: 50 ppm 8 hours.  
TWA: 240 mg/m³ 8 hours.  
ACGIH TLV (United States, 3/2015).  
TWA: 3 ppm 8 hours.  
TWA: 7.5 mg/m³ 8 hours.  
STEL: 6 ppm 15 minutes.  
STEL: 15 mg/m³ 15 minutes.  
TWA: 3 ppm 8 hours.  
TWA: 8 mg/m³ 8 hours.  
STEL: 6 ppm 15 minutes.  
STEL: 15 mg/m³ 15 minutes.  
NIOSH REL (United States, 10/2013).  
TWA: 3 ppm 10 hours.  
TWA: 8 mg/m³ 10 hours.  
STEL: 6 ppm 15 minutes.  
STEL: 15 mg/m³ 15 minutes.  
OSHA PEL (United States, 2/2013).  
TWA: 3 ppm 8 hours.  
TWA: 6 mg/m³ 8 hours. |
Absorbed through skin.  
TWA: 25 ppm 8 hours.  
TWA: 120 mg/m³ 8 hours.  
NIOSH REL (United States, 10/2013).  
Absorbed through skin.  
TWA: 5 ppm 10 hours.  
TWA: 24 mg/m³ 10 hours.  
ACGIH TLV (United States, 3/2015).  
TWA: 20 ppm 8 hours.  
OSHA PEL (United States, 2/2013).  
Absorbed through skin.  
TWA: 50 ppm 8 hours.  
TWA: 240 mg/m³ 8 hours.  
ACGIH TLV (United States, 3/2015).  
TWA: 3 ppm 8 hours.  
TWA: 7.5 mg/m³ 8 hours.  
STEL: 6 ppm 15 minutes.  
STEL: 15 mg/m³ 15 minutes.  
TWA: 3 ppm 8 hours.  
TWA: 8 mg/m³ 8 hours.  
STEL: 6 ppm 15 minutes.  
STEL: 15 mg/m³ 15 minutes.  
NIOSH REL (United States, 10/2013).  
TWA: 3 ppm 10 hours.  
TWA: 8 mg/m³ 10 hours.  
STEL: 6 ppm 15 minutes.  
STEL: 15 mg/m³ 15 minutes.  
OSHA PEL (United States, 2/2013).  
TWA: 3 ppm 8 hours.  
TWA: 6 mg/m³ 8 hours. |

### Appropriate engineering controls
- If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Environmental exposure controls
- Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures
- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

### Hygiene measures
- Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Section 8. Exposure controls/personal protection

**Eye/face protection**: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: splash goggles

**Skin protection**

**Hand protection**: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): butyl rubber

**Body protection**: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection**: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: natural rubber (latex)

**Respiratory protection**: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Personal protective equipment (Pictograms)**

Section 9. Physical and chemical properties

**Appearance**

**Physical state**: Liquid.

**Color**: Red.

**Odor**: Characteristic.

**Odor threshold**: Not available.

**pH**: 13 to 13.9

**Melting point**: Not available.

**Boiling point**: Not available.

**Flash point**: Closed cup: 250°C (482°F) [Product does not sustain combustion.]

**Evaporation rate**: Not available.

**Flammability (solid, gas)**: Not available.

**Lower and upper explosive (flammable) limits**: Not available.

**Vapor pressure**: Not available.

**Vapor density**: Not available.

**Relative density**: 1.075

**Solubility**: Easily soluble in the following materials: cold water and hot water.

**Partition coefficient: n-octanol/water**: Not available.

**Auto-ignition temperature**: Not available.

**Decomposition temperature**: Not available.

**Viscosity**: Not available.

**Aerosol product**

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Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: No specific data.

Incompatible materials: Reactive or incompatible with the following materials: acids

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol</td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>450 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>220 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>250 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>2-aminoethanol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1720 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Silicic acid, sodium salt</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1960 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium hydroxide</td>
<td>Eyes - Severe irritant</td>
<td>Monkey</td>
<td>-</td>
<td>24 hours 1 Percent</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>400 Micrograms</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 50 Micrograms</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>1 Percent Micrograms</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>0.5 minutes 1 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Human</td>
<td>-</td>
<td>24 hours 2 Percent</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>2-aminoethanol</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>250 Micrograms</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>505 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Silicic acid, sodium salt</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 10 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization
Not available.

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Section 11. Toxicological information

**Mutagenicity**
Not available.

**Carcinogenicity**
Not available.

**Classification**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>

**Reproductive toxicity**
Not available.

**Teratogenicity**
Not available.

**Specific target organ toxicity (single exposure)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-aminoethanol</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>sodium xylenesulphonate</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

**Specific target organ toxicity (repeated exposure)**
Not available.

**Aspiration hazard**
Not available.

**Information on the likely routes of exposure**
Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

- **Eye contact**: Causes serious eye damage.
- **Inhalation**: No known significant effects or critical hazards.
- **Skin contact**: Causes severe burns.
- **Ingestion**: No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

- **Eye contact**: Adverse symptoms may include the following:
  - pain
  - watering
  - redness

- **Inhalation**: No specific data.

- **Skin contact**: Adverse symptoms may include the following:
  - pain or irritation
  - redness
  - blistering may occur

- **Ingestion**: Adverse symptoms may include the following:
  - stomach pains

**Delayed and immediate effects and also chronic effects from short and long term exposure**

- **Short term exposure**
  - **Potential immediate effects**: skin lesion/eczema skin rash or hives conjunctivitis cornea dehydration pain coughing wheezing and breathing difficulties nausea or vomiting
  - **Potential delayed effects**: Not available.
Section 11. Toxicological information

Long term exposure
Potential immediate effects : Not available.
Potential delayed effects : Not available.
Potential chronic health effects
Not available.

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>9078.9 mg/kg</td>
</tr>
</tbody>
</table>

Section 12. Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium hydroxide</td>
<td>Acute EC50 40.38 mg/l Fresh water</td>
<td>Crustaceans - Ceriodaphnia dubia - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 125 ppm Fresh water</td>
<td>Fish - Gambusia affinis - Adult</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 56 mg/l Marine water</td>
<td>Fish - Poecilia reticulata - Young</td>
<td>96 hours</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>Acute EC50 &gt;1000 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 800000 µg/l Marine water</td>
<td>Crustaceans - Crangon crangon</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1250000 µg/l Marine water</td>
<td>Fish - Menidia beryllina</td>
<td>96 hours</td>
</tr>
<tr>
<td>2-aminoethanol</td>
<td>Acute EC50 8.42 mg/l Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 &gt;100000 µg/l Marine water</td>
<td>Crustaceans - Crangon crangon - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 150 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss - Yolk-sac fry</td>
<td>96 hours</td>
</tr>
<tr>
<td>Silicic acid, sodium salt</td>
<td>Acute EC50 0.4 mg/l Fresh water</td>
<td>Crustaceans - Ceriodaphnia dubia - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 494000 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
Not available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol</td>
<td>0.81</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>2-aminoethanol</td>
<td>-1.31</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>sodium xylene sulphonate</td>
<td>-3.12</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil
Soil/water partition coefficient (K_{oc}) : Not available.

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Section 12. Ecological information

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

<table>
<thead>
<tr>
<th>UN number</th>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
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</table>

<table>
<thead>
<tr>
<th>UN proper shipping name</th>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrosive liquid, n.o.s. (sodium hydroxide)</td>
<td>Corrosive liquid, n.o.s. (sodium hydroxide)</td>
<td>Corrosive liquid, n.o.s. (sodium hydroxide)</td>
<td>Corrosive liquid, n.o.s. (sodium hydroxide)</td>
<td>Corrosive liquid, n.o.s. (sodium hydroxide)</td>
<td>Corrosive liquid, n.o.s. (sodium hydroxide)</td>
<td>Corrosive liquid, n.o.s. (sodium hydroxide)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport hazard class(es)</th>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
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<td>8</td>
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</table>

<table>
<thead>
<tr>
<th>Packing group</th>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
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</table>

<table>
<thead>
<tr>
<th>Environmental hazards</th>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Additional information</th>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reportable quantity</td>
<td>23737.2 lbs / 10776.7 kg [2648.3 gal / 10024.8 L]</td>
<td>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.</td>
<td>The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.</td>
<td>The marine pollutant mark may appear if required by other transportation regulations.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Section 14. Transport information

<table>
<thead>
<tr>
<th>(reportable quantity) transportation requirements.</th>
<th>Limited quantity Yes.</th>
<th>is not required when transported by road or rail.</th>
<th>Explosive Limit and Limited Quantity Index 1</th>
</tr>
</thead>
</table>

Special precautions for user: Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not available.

Section 15. Regulatory information

U.S. Federal regulations:
- Clean Water Act (CWA) 311: sodium hydroxide; sodium dodecylbenzenesulfonate
- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not listed
- Clean Air Act Section 602 Class I Substances: Not listed
- Clean Air Act Section 602 Class II Substances: Not listed
- DEA List I Chemicals (Precursor Chemicals): Not listed
- DEA List II Chemicals (Essential Chemicals): Not listed
- TSCA 8(a) PAIR: benzaldehyde
- TSCA 8(a) CDR Exempt/Partial exemption: Not determined
  All components are listed or exempted.
- Clean Water Act (CWA) 311: sodium hydroxide; sodium dodecylbenzenesulfonate

SARA 302/304
Composition/information on ingredients:
No products were found.

SARA 304 RQ: Not applicable.
SARA 311/312
Classification: Immediate (acute) health hazard

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium hydroxide</td>
<td>≥3 - &lt;5</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>≥3 - &lt;5</td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>2-aminoethanol</td>
<td>≥1 - &lt;3</td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>Silicic acid, sodium salt</td>
<td>≥1 - &lt;3</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>Fatty acids, tall-oil, sodium salts</td>
<td>≥1 - &lt;3</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>sodium xylenesulphonate</td>
<td>≥1 - &lt;3</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
</tbody>
</table>
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>SARA 313</th>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form R - Reporting requirements</td>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>≥3 - &lt;5</td>
</tr>
<tr>
<td>Supplier notification</td>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>≥3 - &lt;5</td>
</tr>
</tbody>
</table>

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts: The following components are listed: ETHANOLAMINE; 2-AMINOETHANOL; Sodium Hydroxide Solution; 2-BUTOXYETHANOL; BUTYL CELLOSOLVE

New York: The following components are listed: Sodium hydroxide

New Jersey: The following components are listed: ETHANOLAMINE; ETHANOL, 2-AMINO-; Sodium Hydroxide Solution; 2-BUTOXY ETHANOL; BUTYL CELLOSOLVE

Pennsylvania: The following components are listed: ETHANOL, 2-AMINO-; Sodium Hydroxide Solution; ETHANOL, 2-BUTOXY-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals
Not listed.

Montreal Protocol (Annexes A, B, C, E)
Not listed.

Stockholm Convention on Persistent Organic Pollutants
Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)
Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals
Not listed.

International lists

National inventory

Australia: All components are listed or exempted.

Canada: All components are listed or exempted.

China: All components are listed or exempted.

Europe: All components are listed or exempted.

Japan: Japan inventory (ENCS): All components are listed or exempted.

Japan inventory (ISHL): Not determined.

Malaysia: Not determined.

New Zealand: All components are listed or exempted.

Philippines: All components are listed or exempted.

Republic of Korea: All components are listed or exempted.

Taiwan: All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>*2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

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Section 16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

**National Fire Protection Association (U.S.A.)**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability/Reactivity</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corr. 1, H314</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Eye Dam. 1, H318</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

**Procedure used to derive the classification**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corr. 1, H314</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Eye Dam. 1, H318</td>
<td>On basis of test data</td>
</tr>
</tbody>
</table>

**History**

- **Date of printing**: 7/21/2017
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- **Date of previous issue**: 2/7/2017
- **Version**: 2

**Key to abbreviations**

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- UN = United Nations

**References**

- Not available.

- Indicates information that has changed from previously issued version.

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.