SECTION 1. IDENTIFICATION

Product name : PROVON® Antibacterial Plum Foam Handwash

Manufacturer or supplier’s details
Company name of supplier : GOJO Industries, Inc.
Address : One GOJO Plaza, Suite 500
Akron OH 44311
Telephone : 1 (330) 255-6000
Emergency telephone : 1-800-424-9300 CHEMTREC

Recommended use of the chemical and restrictions on use
Recommended use : Antibacterial Soap
Restrictions on use : This is a personal care or cosmetic product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and consumer products, specifically defined by regulations around the world, are exempt from the requirement of an SDS for the consumer. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product for industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product. For specific intended-use guidance, please refer to the information provided on the package or instruction sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Flammable liquids : Category 3
Serious eye damage : Category 1

GHS Label element
Hazard pictograms : 

Signal Word : Danger
Hazard Statements : H226 Flammable liquid and vapor.
Precautionary Statements

**Prevention:**
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233 Keep container tightly closed.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P280 Wear protective gloves/eye protection/face protection.

**Response:**
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305 + P351 + P338 + P310 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.

**Storage:**
- P403 + P235 Store in a well-ventilated place. Keep cool.

**Disposal:**
- P501 Dispose of contents/container to an approved waste disposal plant.

Other hazards
Vapors may form explosive mixture with air.

---

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

**Hazardous ingredients**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Dodecanoic acid</td>
<td>143-07-7</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>Ethanolamine</td>
<td>141-43-5</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts</td>
<td>68850-39-5</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

---

SECTION 4. FIRST AID MEASURES

**General advice:**
In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

**If inhaled:**
If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact: Wash with water and soap as a precaution. Get medical attention if symptoms occur.

In case of eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention immediately.

If swallowed: If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed: Causes serious eye damage.

Protection of first-aiders: First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.

Notes to physician: Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media: High volume water jet

Specific hazards during fire fighting: Do not use a solid water stream as it may scatter and spread fire. Flash back possible over considerable distance. Vapors may form explosive mixtures with air. Exposure to combustion products may be a hazard to health.

Hazardous combustion products: Carbon oxides
Nitrogen oxides (NOx)
Metal oxides

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Special protective equipment: In the event of fire, wear self-contained breathing apparatus.
SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
- Remove all sources of ignition.
- Use personal protective equipment.
- Follow safe handling advice and personal protective equipment recommendations.
- For fire-fighters: Use personal protective equipment.

Environmental precautions:
- Discharge into the environment must be avoided.
- Prevent further leakage or spillage if safe to do so.
- Prevent spreading over a wide area (e.g. by containment or oil barriers).
- Retain and dispose of contaminated wash water.
- Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up:
- Non-sparking tools should be used.
- Soak up with inert absorbent material.
- Suppress (knock down) gases/vapors/mists with a water spray jet.
- For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
- Clean up remaining materials from spill with suitable absorbent.
- Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
- Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures:
- See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation:
- Use with local exhaust ventilation.
- Use only in an area equipped with explosion proof exhaust ventilation.

Advice on safe handling:
- Avoid inhalation of vapor or mist.
- Do not swallow.
- Do not get in eyes.
- Avoid prolonged or repeated contact with skin.
- Handle in accordance with good industrial hygiene and safety practice.
- Non-sparking tools should be used.
- Keep container tightly closed.
Keep away from heat and sources of ignition.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage: Keep in properly labeled containers.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Keep away from heat and sources of ignition.

Materials to avoid: Do not store with the following product types:
- Strong oxidizing agents
- Organic peroxides
- Flammable solids
- Pyrophoric liquids
- Pyrophoric solids
- Self-heating substances and mixtures
- Substances and mixtures which in contact with water emit flammable gases
- Explosives
- Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingredients with workplace control parameters**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>TWA</td>
<td>1,000 ppm, 1,900 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1,000 ppm, 1,900 mg/m³</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>1,000 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>US WEEL</td>
</tr>
<tr>
<td>Ethanolamine</td>
<td>141-43-5</td>
<td>TWA</td>
<td>3 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>6 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>3 ppm, 8 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>6 ppm, 15 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>3 ppm, 6 mg/m³</td>
<td>OSHA Z-1</td>
</tr>
</tbody>
</table>

**Hazardous components without workplace control parameters**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dodecanoic acid</td>
<td>143-07-7</td>
</tr>
<tr>
<td>Imidazolium compounds, 1-[[2-[(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-</td>
<td>68650-39-5</td>
</tr>
</tbody>
</table>
norcoco alkyl, hydroxides, sodium salts

Engineering measures:
- Minimize workplace exposure concentrations.
- Use only in an area equipped with explosion proof exhaust ventilation.
- Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection:
- General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn.
- Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection
- Material: Impervious gloves
- Material: Flame retardant gloves

Remarks:
- Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often!
- For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection:
- Wear the following personal protective equipment:
  - Chemical resistant goggles must be worn.
  - If splashes are likely to occur, wear:
    - Face-shield

Skin and body protection:
- Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
- Wear the following personal protective equipment:
  - Flame retardant antistatic protective clothing.
  - Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures:
- Ensure that eye flushing systems and safety showers are located close to the working place.
- When using do not eat, drink or smoke.
- Wash contaminated clothing before re-use.
**SECTION 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>clear, purple</td>
</tr>
<tr>
<td>Odor</td>
<td>citrus</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
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<tr>
<td>pH</td>
<td>7.8 - 9.7</td>
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<tr>
<td>Melting point/freezing point</td>
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<tr>
<td>Initial boiling point and boiling range</td>
<td>97.00 °C</td>
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<tr>
<td>Flash point</td>
<td>56.00 °C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.00 g/cm³</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>soluble</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>The substance or mixture is not classified self-reactive.</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>10 - 20 mm²/s (20 °C)</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>The substance or mixture is not classified as oxidizing.</td>
</tr>
</tbody>
</table>
SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Flammable liquid and vapor. Vapors may form explosive mixture with air. Can react with strong oxidizing agents.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 40 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Ingredients:

Ethanol:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 124.7 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Dodecanoic acid:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
### Acute inhalation toxicity
- **LC50 (Rat):** > 0.162 mg/l
- **Exposure time:** 4 h
- **Test atmosphere:** vapor
- **Remarks:** Based on data from similar materials

### Acute dermal toxicity
- **LD50 (Rabbit):** > 2,000 mg/kg
- **Assessment:** The substance or mixture has no acute dermal toxicity
- **Remarks:** Based on data from similar materials

### Propylene glycol:
- **Acute oral toxicity:** LD50 (Rat): > 5,000 mg/kg
- **Acute inhalation toxicity:**
  - **LC50 (Rabbit):** > 159 mg/l, > 51091 ppm
  - **Exposure time:** 4 h
  - **Test atmosphere:** dust/mist
  - **Assessment:** The substance or mixture has no acute inhalation toxicity

### Ethanolamine:
- **Acute oral toxicity:** LD50 (Rat): 1,515 mg/kg
- **Acute inhalation toxicity:**
  - **Acute toxicity estimate:** 11 mg/l
  - **Test atmosphere:** vapor
  - **Method:** Expert judgment
  - **Remarks:** Based on harmonised classification in EU regulation 1272/2008, Annex VI

### Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:
- **Acute oral toxicity:**
  - **LD50 (Rat, male):** > 5,000 mg/kg
  - **Remarks:** Based on data from similar materials
- **Acute dermal toxicity:**
  - **LD50 (Rabbit):** > 5,000 mg/kg
  - **Method:** OECD Test Guideline 402
  - **Remarks:** Based on data from similar materials

### Skin corrosion/irritation
- Not classified based on available information.

### Product:
- Result: No skin irritation

### Ingredients:
- **Ethanol:**
  - **Species:** Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Dodecanoic acid:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Propylene glycol:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Ethanolamine:
Species: Rabbit
Result: Corrosive after 3 minutes to 1 hour of exposure

Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
Remarks: Based on data from similar materials

Serious eye damage/eye irritation
Causes serious eye damage.

Ingredients:
Ethanol:
Species: Rabbit
Result: Irritation to eyes, reversing within 21 days
Method: OECD Test Guideline 405

Dodecanoic acid:
Species: Rabbit
Result: Irreversible effects on the eye
Method: OECD Test Guideline 405

Propylene glycol:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Ethanolamine:
Species: Rabbit
Result: Irreversible effects on the eye

Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:
Species: Rabbit
Result: Irreversible effects on the eye
Method: OECD Test Guideline 405
Remarks: Based on data from similar materials
Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

**Product:**
Assessment: Does not cause skin sensitization.

**Ingredients:**

**Ethanol:**
- Test Type: Local lymph node assay (LLNA)
- Routes of exposure: Skin contact
- Species: Mouse
- Result: negative

**Dodecanoic acid:**
- Test Type: Maximization Test (GPMT)
- Routes of exposure: Skin contact
- Species: Guinea pig
- Result: negative

**Propylene glycol:**
- Test Type: Maximization Test (GPMT)
- Routes of exposure: Skin contact
- Species: Guinea pig
- Result: negative

**Ethanolamine:**
- Test Type: Maximization Test (GPMT)
- Routes of exposure: Skin contact
- Species: Guinea pig
- Result: negative

**Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:**
- Test Type: Maximization Test (GPMT)
- Routes of exposure: Skin contact
- Species: Guinea pig
- Method: OECD Test Guideline 406
- Result: negative
- Remarks: Based on data from similar materials

**Germ cell mutagenicity**
Not classified based on available information.

**Ingredients:**

**Ethanol:**
- Genotoxicity in vitro: Test Type: In vitro mammalian cell gene mutation test
  Result: negative

- Genotoxicity in vivo: Test Type: Rodent dominant lethal test (germ cell) (in vivo)
  Species: Mouse
Dodecanoic acid:
Genotoxicity in vitro:
- Test Type: In vitro mammalian cell gene mutation test
  - Method: OECD Test Guideline 476
  - Result: negative
  - Remarks: Based on data from similar materials

Propylene glycol:
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  - Result: negative

Genotoxicity in vivo:
- Test Type: In vivo micronucleus test
  - Species: Mouse
  - Application Route: Intraperitoneal injection
  - Result: negative

Ethanolamine:
Genotoxicity in vitro:
- Test Type: In vitro mammalian cell gene mutation test
  - Method: OECD Test Guideline 476
  - Result: negative

Genotoxicity in vivo:
- Test Type: In vivo mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
  - Species: Mouse
  - Application Route: Ingestion
  - Method: OECD Test Guideline 474
  - Result: negative

Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:
Genotoxicity in vitro:
- Test Type: Chromosome aberration test in vitro
  - Method: OECD Test Guideline 473
  - Result: negative
  - Remarks: Based on data from similar materials

- Test Type: Bacterial reverse mutation assay (AMES)
  - Result: negative
  - Remarks: Based on data from similar materials

- Test Type: In vitro mammalian cell gene mutation test
  - Method: OECD Test Guideline 476
  - Result: negative
  - Remarks: Based on data from similar materials

Carcinogenicity:
- Not classified based on available information.

Ingredients:
Propylene glycol:
- Species: Rat
- Application Route: Ingestion
Exposure time: 2 Years
Result: negative

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

Reproductive toxicity
Not classified based on available information.

Ingredients:

Ethanol:
Effects on fertility:
Test Type: Two-generation reproduction toxicity study
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative

Effect on fetal development:

Dodecanoic acid:
Effects on fertility:
Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effect on fetal development:

Propylene glycol:
Effects on fertility:
Species: Mouse
Application Route: Ingestion
Result: negative

Effect on fetal development:
Ethanolamine:

Effects on fertility:
- Test Type: Two-generation reproduction toxicity study
- Species: Rat
- Application Route: Ingestion
- Result: negative

Effects on fetal development:
- Test Type: Embryo-fetal development
- Species: Rat
- Application Route: Ingestion
- Method: OECD Test Guideline 414
- Result: negative

STOT-single exposure
- Not classified based on available information.

Ingredients:
- Ethanolamine:
  - Assessment: May cause respiratory irritation.

STOT-repeated exposure
- Not classified based on available information.

Ingredients:
- Ethanolamine:
  - Routes of exposure: inhalation (dust/mist/fume)
  - Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

Repeated dose toxicity

Ingredients:
- Ethanol:
  - Species: Rat
  - NOAEL: 2,400 mg/kg
  - Application Route: Ingestion
  - Exposure time: 2 y

- Dodecanoic acid:
  - Species: Rat
  - NOAEL: 10,000 mg/kg
  - Application Route: Ingestion
  - Exposure time: 18 w

- Propylene glycol:
  - Species: Rat
  - NOAEL: 1,700 mg/kg
  - Application Route: Ingestion
  - Exposure time: 2 y

- Ethanolamine:
  - Species: Rat
  - NOAEL: 150 mg/m3
Application Route: inhalation (dust/mist/fume)
Exposure time: 28 d

Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:

- Species: Rat, female
- NOAEL: 250 mg/kg
- LOAEL: 500 mg/kg
- Application Route: Ingestion
- Exposure time: 28 d
- Remarks: Based on data from similar materials

Aspiration toxicity
Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Ethanol:
- Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): > 1,000 mg/l
  Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
  Exposure time: 48 h
- Toxicity to algae: EC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l
  Exposure time: 72 h

  Method: OECD Test Guideline 201
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
  NOEC (Daphnia magna (Water flea)): 9.6 mg/l
  Exposure time: 9 d
- Toxicity to bacteria: EC50 (Photobacterium phosphoreum): 32.1 mg/l
  Exposure time: 0.25 h

Dodecanoic acid:
- Toxicity to fish: LC50 (Oryzias latipes (Japanese medaka)): 5 mg/l
  Exposure time: 96 h

  Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates:
  EC50 (Daphnia magna (Water flea)): 3.6 mg/l

  Exposure time: 48 h

  Method: OECD Test Guideline 202
- Toxicity to algae:
  EC50 (Selenastrum capricornutum (green algae)): > 7.6 mg/l

  Exposure time: 72 h

  Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility.
<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicity to fish (Chronic toxicity)</th>
<th>Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)</th>
<th>Toxicity to algae</th>
<th>Toxicity to bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane glycol</td>
<td>NOEC (Danio rerio (zebra fish)): 2 mg/l</td>
<td>NOEC (Daphnia magna (Water flea)): 0.47 mg/l</td>
<td>EC50</td>
<td>NOEC (Pseudomonas putida): &gt; 1,000 mg/l</td>
</tr>
<tr>
<td></td>
<td>Exposure time: 28 d</td>
<td>Exposure time: 21 d</td>
<td>Exposure time: 48 h</td>
<td>Exposure time: 30 min</td>
</tr>
<tr>
<td></td>
<td>Remarks: Based on data from similar materials</td>
<td>Method: OECD Test Guideline 211</td>
<td></td>
<td>Method: OECD Test Guideline 209</td>
</tr>
</tbody>
</table>

**Propylene glycol:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
<th>Toxicity to algae</th>
<th>Toxicity to bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l</td>
<td>EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l</td>
<td>EC50</td>
<td>NOEC (Pseudomonas putida): &gt; 20,000 mg/l</td>
</tr>
<tr>
<td></td>
<td>Exposure time: 96 h</td>
<td>Exposure time: 48 h</td>
<td>Exposure time: 48 h</td>
<td>Exposure time: 18 h</td>
</tr>
</tbody>
</table>

**Ethanolamine:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish (Chronic toxicity)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LC50 (Cyprinus carpio (Carp)): 349 mg/l</td>
<td>EC50 (Daphnia magna (Water flea)): 65 mg/l</td>
<td>ErC50 (Selenastrum capricornutum (green algae)): 2.8 mg/l</td>
<td>NOEC (Oryzias latipes (Orange-red killifish)): 1.24 mg/l</td>
</tr>
<tr>
<td></td>
<td>Exposure time: 96 h</td>
<td>Exposure time: 48 h</td>
<td>Exposure time: 72 h</td>
<td>Exposure time: 41 d</td>
</tr>
</tbody>
</table>

**Remarks:**

- NOEC (Selenastrum capricornutum (green algae)): > 7.6 mg/l Exposure time: 72 h
- Method: OECD Test Guideline 201
- Remarks: No toxicity at the limit of solubility.

**Toxicity to fish (Chronic toxicity):**

- NOEC (Danio rerio (zebra fish)): 2 mg/l
- Exposure time: 28 d
- Remarks: Based on data from similar materials

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):**

- NOEC (Daphnia magna (Water flea)): 0.47 mg/l
- Exposure time: 21 d
- Method: OECD Test Guideline 211

**Toxicity to bacteria:**

- EC10 (Pseudomonas putida): > 1,000 mg/l
- Exposure time: 30 min
- Method: OECD Test Guideline 209

**Toxicity to algae:**

- EC50 (Ceriodaphnia costatum (marine diatom)): 19,000 mg/l
- Exposure time: 48 h
- Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
- NOEC (Daphnia magna (Water flea)): 0.85 mg/l
  Exposure time: 21 d

Toxicity to bacteria:
- EC50 (Pseudomonas putida): 110 mg/l
  Exposure time: 17 h

Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:
- LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 203
  Remarks: Based on data from similar materials

- EC50 (Daphnia magna (Water flea)): 17.9 mg/l
  Exposure time: 48 h
  Method: OECD Test Guideline 202
  Remarks: Based on data from similar materials

- NOEC (Pseudokirchneriella subcapitata (green algae)): 3.2 mg/l
  Exposure time: 72 h
  Remarks: Based on data from similar materials

  ErC50 (Pseudokirchneriella subcapitata (green algae)): 10 mg/l
  Exposure time: 72 h
  Remarks: Based on data from similar materials

Persistence and degradability

Product:
- Biodegradability: Result: Biodegradable

Ingredients:

Ethanol:
- Biodegradability: Result: Readily biodegradable.
  Biodegradation: 84%
  Exposure time: 20 d

Dodecanoic acid:
- Biodegradability: Result: Readily biodegradable.
  Biodegradation: 86%
  Exposure time: 30 d
  Method: OECD Test Guideline 301D

Propylene glycol:
- Biodegradability: Result: Readily biodegradable.
  Biodegradation: 98.3%
Exposure time: 28 d  
Method: OECD Test Guideline 301F

**Ethanolamine:**

- **Biodegradability:** Result: Readily biodegradable.  
- **Biodegradation:** > 90 %  
- **Exposure time:** 21 d

**Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:**

- **Biodegradability:** Result: Readily biodegradable.  
- **Biodegradation:** 79 %  
- **Exposure time:** 28 d  
- **Method:** OECD Test Guideline 301F  
- **Remarks:** Based on data from similar materials

### Bioaccumulative potential

#### Ingredients:

**Ethanol:**

- **Partition coefficient: n-octanol/water:** log Pow: -0.35

**Dodecanoic acid:**

- **Bioaccumulation:** Species: Fish  
- **Bioconcentration factor (BCF):** 234 - 288  
- **Remarks:** Based on data from similar materials

- **Partition coefficient: n-octanol/water:** Pow: 4.6

**Propylene glycol:**

- **Partition coefficient: n-octanol/water:** log Pow: -1.07

**Ethanolamine:**

- **Partition coefficient: n-octanol/water:** log Pow: -1.91

### Mobility in soil

No data available

### Other adverse effects

No data available

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**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

- **Waste from residues:** Dispose of in accordance with local regulations.
- **Contaminated packaging:** Dispose of as unused product.  
- Empty containers should be taken to an approved waste
handling site for recycling or disposal.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulation

**UN RTDG**
- UN number: UN 1170
- Proper shipping name: ETHYL ALCOHOL SOLUTION
- Class: 3
- Packing group: III
- Labels: 3

**IATA-DGR**
- UN/ID No.: UN 1170
- Proper shipping name: Ethanol solution
- Class: 3
- Packing group: III
- Labels: Flammable Liquids
- Packing instruction (cargo aircraft): 366
- Packing instruction (passenger aircraft): 355

**IMDG-Code**
- UN number: UN 1170
- Proper shipping name: ETHYL ALCOHOL SOLUTION
  (Triclosan)
- Class: 3
- Packing group: III
- Labels: 3
- EmS Code: F-E, S-D
- Marine pollutant: yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

**49 CFR**
- UN/ID/NA number: UN 1170
- Proper shipping name: ETHYL ALCOHOL SOLUTIONS
- Class: 3
- Packing group: III
- Labels: FLAMMABLE LIQUID
- ERG Code: 127
- Marine pollutant: yes (Triclosan)
SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

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
- Fire Hazard
- Acute Health Hazard

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.

US State Regulations

Pennsylvania Right To Know
- Water: 7732-18-5, 70 - 90 %
- Ethanol: 64-17-5, 10 - 20 %
- Propylene glycol: 57-55-6, 5 - 10 %
- Dodecanoic acid: 143-07-7, 5 - 10 %
- Ethanolamine: 141-43-5, 1 - 5 %
- Propan-2-ol: 67-63-0, 0.1 - 1 %

New Jersey Right To Know
- Water: 7732-18-5, 70 - 90 %
- Ethanol: 64-17-5, 10 - 20 %
- Propylene glycol: 57-55-6, 5 - 10 %
- Dodecanoic acid: 143-07-7, 5 - 10 %
- Ethanolamine: 141-43-5, 1 - 5 %

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

The ingredients of this product are reported in the following inventories:
- AICS: All ingredients listed or exempt.

Inventories
- AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECl (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)
SECTION 16. OTHER INFORMATION

Further information

NFPA:  
Flammability

HMIS III:  
HEALTH
FLAMMABILITY
PHYSICAL HAZARD

Special hazard.

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

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)
ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST : STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA Z-1 / TWA : 8-hour time weighted average
US WEEL / TWA : 8-hr TWA


Revision Date : 04/17/2015

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations...
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<th>MSDS Number:</th>
<th>Date of last issue:</th>
<th>Date of first issue:</th>
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<td>31854-00003</td>
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</tr>
</tbody>
</table>

in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.

US / Z8