SAFETY DATA SHEET

1. Identification

Product identifier: CONCESSION EQUIPMENT DEGREASER

Other means of identification
   SDS number: RE1000009220

Recommended restrictions
   Product use: Cleaner
   Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

   Manufacturer
   Company Name: CLAIRE MANUFACTURING COMPANY
   Address: 1000 Integram Dr
            Pacific, MO 63069
   Telephone: 1-630-543-7600
   Fax:

   Emergency telephone number: 1-866-836-8855

2. Hazard(s) identification

Hazard Classification

   Physical Hazards
      Flammable aerosol Category 1

Label Elements

   Hazard Symbol:

   Signal Word: Danger

   Hazard Statement: Extremely flammable aerosol.

   Precautionary Statements
      Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use.
      Storage: Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS number</th>
<th>Content in percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>5 - &lt;10%</td>
</tr>
<tr>
<td>Ethanol, 2-(2-butoxyethoxy)-</td>
<td>112-34-5</td>
<td>1 - &lt;5%</td>
</tr>
<tr>
<td>Butane</td>
<td>106-97-8</td>
<td>1 - &lt;5%</td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Sodium nitrite, Nitrous acid, sodium salt (1:1)</td>
<td>7632-00-0</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>2-Propanol, 2-methyl-</td>
<td>75-65-0</td>
<td>0 - &lt;0.1%</td>
</tr>
<tr>
<td>Ethanol, 2-butoxy-</td>
<td>111-76-2</td>
<td>0 - &lt;0.1%</td>
</tr>
<tr>
<td>Ammonium hydroxide ((NH4)(OH))</td>
<td>1336-21-6</td>
<td>0 - &lt;0.1%</td>
</tr>
<tr>
<td>Acetic acid, phenylmethyl ester</td>
<td>140-11-4</td>
<td>0 - &lt;0.1%</td>
</tr>
<tr>
<td>1,2-Benzenedicarboxylic acid, 1,2-diyethyl ester</td>
<td>84-66-2</td>
<td>0 - &lt;0.1%</td>
</tr>
<tr>
<td>Benzene, 1,1'-oxybis-</td>
<td>101-84-8</td>
<td>0 - &lt;0.1%</td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: Rinse mouth thoroughly.

Inhalation: Move to fresh air.

Skin Contact: Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

Eye contact: Rinse immediately with plenty of water.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

General Fire Hazards: Use water spray to keep fire-exposed containers cool. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical:
Vapors may travel considerable distance to a source of ignition and flash back.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:
No data available.

Special protective equipment for fire-fighters:
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.

Methods and material for containment and cleaning up:
Stop the flow of material, if this is without risk. Absorb with sand or other inert absorbent.

Notification Procedures:
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk.

Environmental Precautions:
Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages.

7. Handling and storage

Precautions for safe handling:
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use.

Conditions for safe storage, including any incompatibilities:
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Aerosol Level 1

8. Exposure controls/personal protection

Control Parameters
Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>TWA PEL</td>
<td>1,000 ppm, 1,900 mg/m³</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td></td>
<td>REL</td>
<td>1,000 ppm, 1,900 mg/m³</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2005)</td>
</tr>
<tr>
<td></td>
<td>PEL</td>
<td>1,000 ppm, 1,900 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1,000 ppm, 1,900 mg/m³</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1,000 ppm, 1,900 mg/m³</td>
<td>US. Tennessee, OELs. Occupational Exposure Limits, Table Z1A (06 2008)</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>1,000 ppm</td>
<td>US. ACGIH Threshold Limit Values (2009)</td>
</tr>
<tr>
<td></td>
<td>AN ESL</td>
<td>1,880 µg/m³</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>Substance/Compound</td>
<td>ST ESL</td>
<td>AN ESL</td>
<td>ST ESL</td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Ethanol, 2-(2-butoxyethoxy)-</td>
<td>10,000 ppb</td>
<td>1,000 ppb</td>
<td>18,800 µg/m³</td>
</tr>
<tr>
<td>Butane</td>
<td>REL 800 ppm</td>
<td>TWA 800 ppm</td>
<td>STEL 1,000 ppm</td>
</tr>
<tr>
<td>Propane</td>
<td>PEL 1,000 ppm</td>
<td>TWA PEL 1,000 ppm</td>
<td>TWA 1,000 ppm</td>
</tr>
<tr>
<td>2-Propanol, 2-methyl-</td>
<td>TWA 100 ppm</td>
<td>STEL 150 ppm</td>
<td>ST ESL 200 ppb</td>
</tr>
<tr>
<td></td>
<td>AN ESL 67 µg/m³</td>
<td>ST ESL 620 µg/m³</td>
<td>AN ESL 670 µg/m³</td>
</tr>
</tbody>
</table>

**References:**
- US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
- US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
- US. ACGIH Threshold Limit Values (03 2013)
- US. ACGIH Threshold Limit Values (03 2018)
- US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
- US. Tennessee, OELs. Occupational Exposure Limits, Table Z1A (06 2008)

**Other Data:**
- Propane, 2-methyl-
  - STEL 500 mg/m³
  - TWA 1,000 ppm
  - STEL 200 ppb

**Note:** The data includes various exposure limits for different substances, along with their respective sources and publication dates. The limits are indicated as TWA (time-weighted average), STEL (short-term exposure limit), AN ESL (action level screening), and REL (recommended exposure limit). The data is used to guide exposure levels and compliance in various industries.
<table>
<thead>
<tr>
<th>Substance</th>
<th>STEL</th>
<th>TWA PEL</th>
<th>PEL</th>
<th>TWA PEL</th>
<th>REL</th>
<th>TWA</th>
<th>STEL</th>
<th>TWA PEL</th>
<th>REL</th>
<th>TWA</th>
<th>STEL</th>
<th>TWA PEL</th>
<th>REL</th>
<th>TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium hydroxide ((\text{NH}_4\text{)}\text{OH}))</td>
<td>AN ESL 760 ppb</td>
<td>AN ESL 3,700 µg/m3</td>
<td>ST ESL 2,900 µg/m3</td>
<td>AN ESL 600 ppb</td>
<td>AN ESL 92 µg/m3</td>
<td>ST ESL 180 µg/m3</td>
<td>STEL 35 ppm</td>
<td>TWA 25 ppm</td>
<td>STEL 35 ppm</td>
<td>TWA 35 ppm</td>
<td>STEL 35 ppm</td>
<td>TWA 35 ppm</td>
<td>STEL 35 ppm</td>
<td>TWA 35 ppm</td>
</tr>
<tr>
<td>Acetic acid, phenylmethyl ester</td>
<td>TWA 10 ppm</td>
<td>TWA PEL 10 ppm</td>
<td>25 ppm</td>
<td>TWA PEL 25 ppm</td>
<td>10 ppm</td>
<td>TWA 10 ppm</td>
<td>TWA PEL 10 ppm</td>
<td>TWA PEL 10 ppm</td>
<td>REL 25 ppm</td>
<td>TWA 35 ppm</td>
<td>STEL 35 ppm</td>
<td>TWA PEL 25 ppm</td>
<td>REL 25 ppm</td>
<td>TWA 35 ppm</td>
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</table>


SDS_US - RE1000009220 5/18
<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol, 2-butoxy-(Butoxyacetic acid (BAA), with hydrolysis: Sampling time: End of shift.)</td>
<td>200 mg/g (Creatinine in urine)</td>
<td>ACGIH BEL (03 2013)</td>
</tr>
</tbody>
</table>

**Environmental Limit Values**

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<th>Exposure Limit Values</th>
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</thead>
<tbody>
<tr>
<td>US. Texas, Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td>100 ppb</td>
</tr>
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<td>US. Texas, Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td>10 ppb</td>
</tr>
<tr>
<td>US. Texas, Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td>610 µg/m3</td>
</tr>
<tr>
<td>US. Texas, Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td>61 µg/m3</td>
</tr>
<tr>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td>10 ppb</td>
</tr>
<tr>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td>1 ppb</td>
</tr>
<tr>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td>70 µg/m3</td>
</tr>
<tr>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td>7 µg/m3</td>
</tr>
<tr>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td>10 ppb</td>
</tr>
<tr>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td>1 ppb</td>
</tr>
</tbody>
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</tr>
</tbody>
</table>

**Appropriate Engineering Controls**

No data available.
Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection: Wear goggles/face shield.

Skin Protection
Hand Protection: No data available.

Other: No data available.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: When using do not smoke. Observe good industrial hygiene practices.

9. Physical and chemical properties

Appearance
Physical state: liquid
Form: Spray Aerosol
Color: No data available.
Odor: No data available.
Odor threshold: No data available.
pH: No data available.
Melting point/freezing point: No data available.
Initial boiling point and boiling range: No data available.
Flash Point: -104.44 °C
Evaporation rate: No data available.
Flammability (solid, gas): No data available.

Upper/lower limit on flammability or explosive limits
Flammability limit - upper (%): No data available.
Flammability limit - lower (%): No data available.
Explosive limit - upper (%): No data available.
Explosive limit - lower (%): No data available.

Vapor pressure: 3,447.3786 - 4,826.3301 hPa (20 °C)

Vapor density: No data available.
Density: No data available.
Relative density: No data available.
Solubility(ies)
Solubility in water: No data available.
Solubility (other): No data available.
Partition coefficient (n-octanol/water): No data available.

Auto-ignition temperature: No data available.
Decomposition temperature: No data available.
Viscosity: No data available.
10. Stability and reactivity

Reactivity: No data available.

Chemical Stability: Material is stable under normal conditions.

Possibility of hazardous reactions: No data available.

Conditions to avoid: Avoid heat or contamination.

Incompatible Materials: No data available.

Hazardous Decomposition Products: No data available.

11. Toxicological information

Information on likely routes of exposure

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Ingestion: No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Ingestion: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: ATEmix: 28,647.73 mg/kg

Dermal
Product: Not classified for acute toxicity based on available data.

Specified substance(s):
Ethanol  
LD 50 (Rabbit): 17,100 mg/kg

Ethanol, 2-(2-butoxyethoxy)  
LD 50 (Rabbit): 2,764 mg/kg

Sodium nitrite, Nitrous acid, sodium salt (1:1)  
LD 50: > 2,000 mg/kg
2-Propanol, 2-methyl-   LD 50: > 2,000 mg/kg
Ethanol, 2-butoxy-     LD 50 (Rabbit): 667 mg/kg
Acetic acid, phenylmethyl ester LD 50 (Rabbit): > 5 g/kg
Benzene, 1,1'-oxybis-   LD 50 (Rabbit): > 7,940 mg/kg

**Inhalation Product:**
Not classified for acute toxicity based on available data.

**Specified substance(s):**
- Ethanol
  - LC 50 (Rat): 124.7 mg/l
  - LC 50: > 5 mg/l
- Ethanol, 2-(2-butoxyethoxy)-
  - LC 50 (Various): > 20 mg/l
- Butane
  - LC 50 (Mouse): 1,237 mg/l
- Propane
  - LC 50 (Mouse): 1,237 mg/l
- Sodium nitrite, Nitrous acid, sodium salt (1:1)
  - LC 0 (Rat): 0.0951 mg/l
- 2-Propanol, 2-methyl-
  - LC 50: < 20 mg/l
- Ethanol, 2-butoxy-
  - LC 50: < 5 mg/l
  - LC 50: < 20 mg/l
- Acetic acid, phenylmethyl ester
  - LC Lo (Rat): > 0.766 mg/l
- Benzene, 1,1'-oxybis-
  - LC 50: > 20 mg/l

**Repeated dose toxicity Product:**
No data available.

**Specified substance(s):**
- Ethanol
  - NOAEL (Rat(Male), Oral, 7 - 14 Weeks): 10 % (m) Oral Experimental result, Key study
- Ethanol, 2-(2-butoxyethoxy)-
  - NOAEL (Rat(Female, Male), Oral, 90 d): 250 mg/kg Oral Experimental result, Key study
  - NOAEL (Rat(Female, Male), Dermal, 13 Weeks): > 2,000 mg/kg Dermal Experimental result, Key study
  - NOAEL (Rat(Female, Male), Inhalation, 90 - 120 d): 14 ppm(m) Inhalation Experimental result, Key study
- Butane
  - NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation Experimental result, Key study
  - LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation Experimental result, Key study
- Propane
  - NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation Experimental result, Key study
  - LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation Experimental result, Key study
Sodium nitrite, Nitrous acid, sodium salt (1:1)

NOAEL (Rat(Male), Oral, 2 yr): 10 mg/kg Oral Experimental result, Supporting study
LOAEL (Rat(Male), Oral, 14 Weeks): 115 mg/kg Oral Experimental result, Weight of Evidence study

Ethanol, 2-butoxy-

NOAEL (Rabbit(Female, Male), Dermal, 90 d): > 150 mg/kg Dermal Experimental result, Key study
NOAEL (Rat(Female), Oral, 90 d): < 82 mg/kg Oral Experimental result, Key study
NOAEL (Rat(Female), Inhalation, 2 yr): < 31 ppm(m) Inhalation Experimental result, Key study

Acetic acid, phenylmethyl ester

NOAEL (Rat(Female), Oral, 13 Weeks): 900 mg/kg Oral Experimental result, Supporting study
NOAEL (Rat(Female), Oral, 13 Weeks): 480 mg/kg Oral Experimental result, Supporting study

1,2-Benzenedicarboxylic acid, 1,2-diethyl ester

NOAEL (Rat(Female, Male), Oral, 6 - 16 Weeks): 150 mg/kg Oral Experimental result, Key study

Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):
- Ethanol
  in vivo (Rabbit): Not irritant Experimental result, Key study
- Ethanol, 2-(2-butoxyethoxy)-
  in vivo (Rabbit): Not irritant Experimental result, Supporting study
- Sodium nitrite, Nitrous acid, sodium salt (1:1)
  in vivo (Rabbit): Not irritant Experimental result, Weight of Evidence study
- Ethanol, 2-butoxy-
  in vivo (Rabbit): Irritating Experimental result, Key study
- Acetic acid, phenylmethyl ester
  in vivo (Rabbit): Not irritant Experimental result, Key study
- 1,2-Benzenedicarboxylic acid, 1,2-diethyl ester
  in vivo (Rabbit): Not irritant Experimental result, Key study
- Benzene, 1,1'-oxybis-
  in vivo (Rabbit): Not irritant Experimental result, Key study

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):
- Ethanol
  Rabbit, 1 - 24 hrs: Not irritating
- Ethanol, 2-(2-butoxyethoxy)-
  Rabbit, 24 - 72 hrs: Highly irritating
- Ethanol, 2-butoxy-
  Rabbit, 24 - 72 hrs: Irritating
- Benzene, 1,1'-oxybis-
  Rabbit, 48 - 72 hrs: Irritating.
Respiratory or Skin Sensitization
Product: No data available.

Specified substance(s):
- Ethanol: Skin sensitization; in vivo (Guinea pig): Non sensitising
- Ethanol, 2-(2-butoxyethoxy)-: Skin sensitization; in vivo (Guinea pig): Non sensitising
- Ethanol, 2-butoxy-: Skin sensitization; in vivo (Guinea pig): Non sensitising
- Acetic acid, phenylmethyl ester 1,2-: Skin sensitization; in vivo (Guinea pig): Sensitising
- Benzenedicarboxylic acid, 1,2-diethyl ester: Skin sensitization; in vivo (Guinea pig): Non sensitising
- Benzene, 1,1′-oxybis-: Skin sensitization; in vivo (Guinea pig): Non sensitising
- Skin sensitization; in vivo (Human): Non sensitising

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

No carcinogenic components identified

Germ Cell Mutagenicity
In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific substance(s):
- 2-Propanol, 2-methyl-: Inhalation - dust and mist: Respiratory tract irritation. - Category 3 with respiratory tract irritation.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.
Specified substance(s):
- Ethanol
- Ethanol, 2-((2-butoxyethoxy)-
- Butane
- Propane
- Sodium nitrite, Nitrous acid, sodium salt (1:1)
- 2-Propanol, 2-methyl-
- Ethanol, 2-butoxy-
- Ammonium hydroxide (\((NH4)(OH)\))
- Acetic acid, phenylmethyl ester
- 1,2-Benzenedicarboxylic acid, 1,2-diethyl ester
- Benzene, 1,1'-oxybis-

Aquatic Invertebrates Product:
No data available.

Specified substance(s):
- Ethanol
- Ethanol, 2-((2-butoxyethoxy)-
- Butane
- Sodium nitrite, Nitrous acid, sodium salt (1:1)
- 2-Propanol, 2-methyl-
- Ethanol, 2-butoxy-
- Ammonium hydroxide (\((NH4)(OH)\))
Acetic acid, phenylmethyl ester EC 50 (Daphnia magna, 24 h): 25 mg/l Experimental result, Key study EC 50 (Daphnia magna, 48 h): 17 mg/l Experimental result, Key study NOAEL (Daphnia magna, 48 h): 10 mg/l Experimental result, Key study

1,2-Benzenedicarboxylic acid, 1,2-diethyl ester NOAEL (Daphnia magna, 48 h): 43 mg/l Experimental result, Key study LC 50 (Daphnia magna, 48 h): 90 mg/l Experimental result, Key study

Benzene, 1,1'-oxybis- LC 50 (Daphnia magna, 48 h): 1.7 mg/l Experimental result, Key study NOAEL (Daphnia magna, 48 h): 1 mg/l Experimental result, Key study

**Chronic hazards to the aquatic environment:**

**Fish**

Product: No data available.

**Specified substance(s):**

- Ethanol NOAEL (Oryzias latipes): 7,900 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study
- Sodium nitrite, Nitrous acid, sodium salt (1:1) NOAEL (Cyprinus carpio): 1.05 mg/l Experimental result, Key study
- 2-Propanol, 2-methyl- NOAEL (Clarias gariepinus): 332 mg/l Experimental result, Key study
- Ethanol, 2-butoxy- NOAEL (Danio rerio): > 100 mg/l Experimental result, Key study

**Aquatic Invertebrates**

Product: No data available.

**Specified substance(s):**

- Ethanol LC 50 (Daphnia magna): 454 mg/l Experimental result, Key study NOAEL (Daphnia magna): 9.6 mg/l Experimental result, Key study
- Sodium nitrite, Nitrous acid, sodium salt (1:1) NOAEL (Penaeus monodon): 2 mg/l Experimental result, Key study EC 50 (Penaeus monodon): 114.9 mg/l Experimental result, Key study LC 50 (Penaeus monodon): > 95.6 mg/l Experimental result, Key study
- Ethanol, 2-butoxy- EC 50 (Daphnia magna): 297 mg/l Experimental result, Key study EC 10 (Daphnia magna): 134 mg/l Experimental result, Key study
- 1,2-Benzenedicarboxylic acid, 1,2-diethyl ester NOAEL (Daphnia magna): 25 mg/l Experimental result, Key study

**Toxicity to Aquatic Plants**

Product: No data available.

**Persistence and Degradability**

**Biodegradation**

Product: No data available.

**Specified substance(s):**

- Ethanol 95 % Detected in water. Experimental result, Key study
- Ethanol, 2-(2-butoxyethoxy)- 85 % (28 d) Detected in water. Experimental result, Key study
- Butane 100 % (385.5 h) Detected in water. Experimental result, Key study 50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study
Propane 100 % (385.5 h) Detected in water. Experimental result, Key study
50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study

2-Propanol, 2-methyl- 2.6 - 5.1 % (29 d) Detected in water. Experimental result, Key study

Ethanol, 2-butoxy- 90.4 % Detected in water. Experimental result, Key study

Acetic acid, phenylmethyl ester 100 % (28 d) Detected in water. Experimental result, Key study

1,2-Benzenedicarboxylic acid, 1,2-diethyl ester 94.6 % (28 d) Detected in water. Experimental result, Key study

Benzene, 1,1'-oxybis- 76 % Detected in water. Experimental result, Key study

**BOD/COD Ratio**

**Product:** No data available.

**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**

**Product:** No data available.

**Specified substance(s):**

- **Ethanol**
  - Cyprinus carpio, Bioconcentration Factor (BCF): 4.5 Aquatic sediment Read-across from supporting substance (structural analogue or surrogate), Supporting study

- **Acetic acid, phenylmethyl ester**
  - Bioconcentration Factor (BCF): 8 Aquatic sediment Estimated by calculation, Key study

- **1,2-Benzenedicarboxylic acid, 1,2-diethyl ester**
  - Bluegill (Lepomis macrochirus), Bioconcentration Factor (BCF): 117 (Flow through)

- **Benzene, 1,1'-oxybis-**
  - Oncorhynchus mykiss, Bioconcentration Factor (BCF): 200 Aquatic sediment Experimental result, Key study

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Mobility in soil:** No data available.

**Known or predicted distribution to environmental compartments**

- **Ethanol** No data available.
- **Ethanol, 2-(2-butoxyethoxy)-** No data available.
- **Butane** No data available.
- **Propane** No data available.
- **Sodium nitrite, Nitrous acid, sodium salt (1:1)** No data available.
- **2-Propanol, 2-methyl-** No data available.
- **Ethanol, 2-butoxy-** No data available.
- **Ammonium hydroxide ((NH4)(OH))** No data available.
- **Acetic acid, phenylmethyl ester** No data available.
- **1,2-Benzenedicarboxylic acid, 1,2-diethyl ester** No data available.
Benzene, 1,1'-oxybis-

No data available.

Other adverse effects:

No data available.

13. Disposal considerations

Disposal instructions: Wash before disposal. Dispose to controlled facilities.

Contaminated Packaging: No data available.

14. Transport information

DOT

UN Number: UN 1950
UN Proper Shipping Name: Aerosols, flammable
Transport Hazard Class(es)
  Class: 2.1
  Label(s): –
Packing Group: II
Marine Pollutant: No
Environmental Hazards: No
Marine Pollutant: No
Special precautions for user: Not regulated.

IMDG

UN Number: UN 1950
UN Proper Shipping Name: Aerosols, flammable
Transport Hazard Class(es)
  Class: 2
  Label(s): –
  EmS No.: –
Packing Group: –
Environmental Hazards: No
Marine Pollutant: No
Special precautions for user: Not regulated.

IATA

UN Number: UN 1950
Proper Shipping Name: Aerosols, flammable
Transport Hazard Class(es)
  Class: 2.1
  Label(s): –
Packing Group: –
Environmental Hazards: No
Marine Pollutant: No
Special precautions for user: Not regulated.
15. Regulatory information

US Federal Regulations
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Butane</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Propane</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Sodium nitrite, Nitrous</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>acid, sodium salt (1:1)</td>
<td></td>
</tr>
<tr>
<td>2-Propanol, 2-methyl-</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Ammonium hydroxide</td>
<td>lbs. 1000</td>
</tr>
<tr>
<td>((NH4)(OH))</td>
<td></td>
</tr>
<tr>
<td>1,2-Benzenedicarboxylic</td>
<td>lbs. 1000</td>
</tr>
<tr>
<td>acid, 1,2-diethyl ester</td>
<td></td>
</tr>
</tbody>
</table>

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Fire Hazard
Flammable aerosol

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Ethanol, 2-(2-butoxyethoxy)-</td>
<td></td>
</tr>
<tr>
<td>Butane</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Propane</td>
<td>lbs. 100</td>
</tr>
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<td>Sodium nitrite, Nitrous</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>acid, sodium salt (1:1)</td>
<td></td>
</tr>
<tr>
<td>2-Propanol, 2-methyl-</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Ethanol, 2-butoxy-</td>
<td>lbs. 1000</td>
</tr>
<tr>
<td>Ammonium hydroxide</td>
<td></td>
</tr>
<tr>
<td>((NH4)(OH))</td>
<td></td>
</tr>
<tr>
<td>1,2-Benzenedicarboxylic</td>
<td>lbs. 1000</td>
</tr>
<tr>
<td>acid, 1,2-diethyl ester</td>
<td></td>
</tr>
</tbody>
</table>

SARA 311/312 Hazardous Chemical

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Threshold Planning Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Ethanol, 2-(2-butoxyethoxy)-</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Butane</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Propane</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Sodium nitrite, Nitrous</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>acid, sodium salt (1:1)</td>
<td></td>
</tr>
<tr>
<td>2-Propanol, 2-methyl-</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Ethanol, 2-butoxy-</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Ammonium hydroxide</td>
<td>10000 lbs</td>
</tr>
</tbody>
</table>
((NH₄)(OH)) Acetic acid, phenylmethyl ester 10000 lbs
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester 10000 lbs
Benzene, 1,1'-oxybis- 10000 lbs

SARA 313 (TRI Reporting) Reporting threshold for manufacturing and processing
Chemical Identity Reporting threshold for other users
Ethanol, 2-(2-butoxyethoxy)- N230 lbs N230 lbs.

US. California Proposition 65
No ingredient requiring a warning under CA Prop 65.

US. New Jersey Worker and Community Right-to-Know Act
Chemical Identity
Ethanol
Ethanol, 2-(2-butoxyethoxy)-
Butane

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances
Chemical Identity
Ethanol
Ethanol, 2-(2-butoxyethoxy)-
Butane

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

International regulations
Montreal protocol
Not applicable

Stockholm convention
Not applicable

Rotterdam convention
Not applicable

Kyoto protocol
Not applicable
Inventory Status:

Australia AICS: On or in compliance with the inventory
Canada DSL Inventory List: On or in compliance with the inventory
EINECS, ELINCS or NLP: Not in compliance with the inventory.
Japan (ENCS) List: Not in compliance with the inventory.
China Inv. Existing Chemical Substances: Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI): Not in compliance with the inventory.
Canada NDSL Inventory: Not in compliance with the inventory.
Philippines PICCS: On or in compliance with the inventory
US TSCA Inventory: On or in compliance with the inventory
New Zealand Inventory of Chemicals: On or in compliance with the inventory
Japan ISHL Listing: Not in compliance with the inventory.
Japan Pharmacopoeia Listing: Not in compliance with the inventory.
Mexico INSQ: Not in compliance with the inventory.
Ontario Inventory: On or in compliance with the inventory
Taiwan Chemical Substance Inventory: On or in compliance with the inventory

16. Other information, including date of preparation or last revision

Issue Date: 07/17/2019
Revision Information: No data available.
Version #: 1.0
Further Information: No data available.
Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.