



# 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

#### Mixtures

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

\* 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**

Chemical Identity	Type	Exposure Limit Values	Source
Ethanol	TWA PEL	1,000 ppm 1,900 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	REL	1,000 ppm 1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	1,000 ppm 1,900 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	1,000 ppm 1,900 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	1,000 ppm 1,900 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	1,000 ppm	US. ACGIH Threshold Limit Values (2009)
	AN ESL	1,880 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)



	ST ESL	10,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	1,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	18,800 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Ethanol, 2-(2-butoxyethoxy)-	ST ESL	670 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	100 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	10 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	67 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Ethanol, 2-(2-butoxyethoxy)- - Inhalable fraction and vapor.	TWA	10 ppm	US. ACGIH Threshold Limit Values (03 2013)
Butane	REL	800 ppm 1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	800 ppm 1,900 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	1,000 ppm	US. ACGIH Threshold Limit Values (03 2018)
	TWA	800 ppm 1,900 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	AN ESL	3,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	7,100 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA PEL	800 ppm 1,900 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	ST ESL	66,000 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	28,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Propane	REL	1,000 ppm 1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA PEL	1,000 ppm 1,800 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	TWA	1,000 ppm 1,800 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	TWA	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
2-Propanol, 2-methyl-	TWA	100 ppm 300 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	150 ppm 450 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL	200 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	20 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	62 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	620 µg/m3	US. Texas. Effects Screening Levels (Texas



				Commission on Environmental Quality) (11 2016)
	STEL	150 ppm	450 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	100 ppm	300 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	PEL	100 ppm	300 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	100 ppm		US. ACGIH Threshold Limit Values (2008)
	STEL	150 ppm	450 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	150 ppm	450 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	TWA PEL	100 ppm	300 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	REL	100 ppm	300 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Ethanol, 2-butoxy-	TWA	20 ppm		US. ACGIH Threshold Limit Values (2008)
	TWA	25 ppm	120 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	5 ppm	24 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	50 ppm	240 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA PEL	20 ppm	97 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	TWA	25 ppm	120 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	AN ESL		760 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL		3,700 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL		2,900 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL		600 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Ammonium hydroxide ((NH4)(OH))	AN ESL		92 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL		180 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	STEL	35 ppm		US. ACGIH Threshold Limit Values (2008)
	TWA	25 ppm		US. ACGIH Threshold Limit Values (2008)
	TWA PEL	25 ppm	18 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	STEL	35 ppm	27 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	STEL	35 ppm	27 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	35 ppm	27 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	REL	25 ppm	18 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	50 ppm	35 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Acetic acid, phenylmethyl ester	TWA	10 ppm		US. ACGIH Threshold Limit Values (2008)
	TWA PEL	10 ppm	61 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)



	ST ESL	100 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	10 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	610 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	61 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	REL	5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (2008)
	TWA PEL	5 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	TWA	5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	5 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL	50 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	5 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Benzene, 1,1'-oxybis- - Vapor.	STEL	2 ppm	US. ACGIH Threshold Limit Values (03 2018)
	TWA	1 ppm	US. ACGIH Threshold Limit Values (03 2018)
	PEL	1 ppm 7 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA PEL	1 ppm 7 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	REL	1 ppm 7 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	1 ppm 7 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Benzene, 1,1'-oxybis-	ST ESL	70 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	7 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Benzene, 1,1'-oxybis- - Vapor.	TWA	1 ppm 7 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
Benzene, 1,1'-oxybis-	ST ESL	10 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	1 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)

**Biological Limit Values**

Chemical Identity	Exposure Limit Values	Source
Ethanol, 2-butoxy- (Butoxyacetic acid (BAA), with hydrolysis: Sampling time: End of shift.)	200 mg/g (Creatinine in urine)	ACGIH BEL (03 2013)

Appropriate Engineering Controls

No data available.



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

<b>General information:</b>	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.
<b>Eye/face protection:</b>	Wear goggles/face shield.
<b>Skin Protection</b>	
<b>Hand Protection:</b>	No data available.
<b>Other:</b>	No data available.
<b>Respiratory Protection:</b>	In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.
<b>Hygiene measures:</b>	When using do not smoke. Observe good industrial hygiene practices.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	liquid
<b>Form:</b>	Spray Aerosol
<b>Color:</b>	No data available.
<b>Odor:</b>	No data available.
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/freezing point:</b>	No data available.
<b>Initial boiling point and boiling range:</b>	No data available.
<b>Flash Point:</b>	-104.44 °C
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	3,447.3786 - 4,826.3301 hPa (20 °C)
<b>Vapor density:</b>	No data available.
<b>Density:</b>	No data available.
<b>Relative density:</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	No data available.
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.



## 10. Stability and reactivity

<b>Reactivity:</b>	No data available.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	No data available.
<b>Conditions to avoid:</b>	Avoid heat or contamination.
<b>Incompatible Materials:</b>	No data available.
<b>Hazardous Decomposition Products:</b>	No data available.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.
<b>Ingestion:</b>	No data available.

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

<b>Inhalation:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.
<b>Ingestion:</b>	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(Male), 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
Benzene, 1,1'-oxybis-	NOAEL (Rat(Female, Male), Dermal, 13 Weeks): 100 mg/kg Dermal Experimental result, Key study NOAEL (Rat(Male), Oral, 13 Weeks): 301 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	Skin sensitization:, in vivo (Guinea pig): Sensitising
1,2-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

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

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.

**Specified 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	LC 50 (Pimephales promelas, 96 h): 15.3 g/l Experimental result, Key study
Ethanol, 2-(2-butoxyethoxy)-	LC 50 (Lepomis macrochirus, 96 h): 1,300 mg/l Experimental result, Key study LC 50 (Pimephales promelas, 96 h): 2,400 mg/l Experimental result, Supporting study
Butane	LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study
Propane	LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study
Sodium nitrite, Nitrous acid, sodium salt (1:1)	LC 50 (Oncorhynchus mykiss, 96 h): 0.54 - 26.3 mg/l Experimental result, Key study
2-Propanol, 2-methyl-	LC 50 (Pimephales promelas, 96 h): > 961 mg/l Experimental result, Key study NOAEL (Pimephales promelas, 96 h): 961 mg/l Experimental result, Key study
Ethanol, 2-butoxy-	LC 50 (Oncorhynchus mykiss, 96 h): 1,474 mg/l Experimental result, Key study
Ammonium hydroxide ((NH <sub>4</sub> )(OH))	LC 50 (Western mosquitofish (Gambusia affinis), 96 h): 15 mg/l Mortality LC 50 (Fathead minnow (Pimephales promelas), 48 h): 7 mg/l Mortality
Acetic acid, phenylmethyl ester	LC 50 (Medaka, high-eyes (Oryzias latipes), 96 h): 3.48 - 4.6 mg/l Mortality LC 50 (Oryzias latipes, 96 h): 4 mg/l Other, Key study
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	NOAEL (Oncorhynchus mykiss, 96 h): 1.9 mg/l Experimental result, Key study LC 50 (Oncorhynchus mykiss, 96 h): 12 mg/l Experimental result, Key study
Benzene, 1,1'-oxybis-	LC 50 (Oncorhynchus mykiss, 96 h): 4.2 mg/l Experimental result, Key study

**Aquatic Invertebrates**

**Product:**

No data available.

**Specified substance(s):**

Ethanol	LC 50 (Ceriodaphnia dubia, 48 h): 5,012 mg/l Experimental result, Key study
Ethanol, 2-(2-butoxyethoxy)-	LC 50 (Daphnia magna, 48 h): +/- 1,743 mg/l QSAR QSAR, Supporting study
Butane	LC 50 (Daphnia sp., 48 h): 69.43 mg/l QSAR QSAR, Key study
Sodium nitrite, Nitrous acid, sodium salt (1:1)	EC 50 (Daphnia magna, 48 h): 15.4 mg/l Experimental result, Key study
2-Propanol, 2-methyl-	NOAEL (Daphnia magna, 48 h): 180 mg/l Experimental result, Key study EC 50 (Daphnia magna, 48 h): 933 mg/l Experimental result, Key study
Ethanol, 2-butoxy-	EC 50 (Daphnia magna, 48 h): 1,550 mg/l Experimental result, Key study
Ammonium hydroxide ((NH <sub>4</sub> )(OH))	LC 50 (Water flea (Ceriodaphnia dubia), 48 h): > 0 - 10 mg/l Mortality



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**

<b>Product:</b>	No data available.
<b>Specified substance(s):</b> 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**

<b>Product:</b>	No data available.
<b>Specified substance(s):</b> 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**

<b>Product:</b>	No data available.
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**Persistence and Degradability**

**Biodegradation**

<b>Product:</b>	No data available.
<b>Specified substance(s):</b> 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 ((NH <sub>4</sub> )(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):**

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

**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**

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

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Ethanol	10000 lbs
Ethanol, 2-(2-butoxyethoxy)-	10000 lbs
Butane	10000 lbs
Propane	10000 lbs
Sodium nitrite, Nitrous acid, sodium salt (1:1)	10000 lbs
2-Propanol, 2-methyl-	10000 lbs
Ethanol, 2-butoxy-	10000 lbs
Ammonium hydroxide	10000 lbs



((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)**

<u>Chemical Identity</u>	<u>Reporting threshold for other users</u>	<u>Reporting threshold for manufacturing and processing</u>
Ethanol, 2-(2-butoxyethoxy)-	N230 lbs	N230 lbs.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):  
Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)  
US State Regulations**

**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**

<b>Issue Date:</b>	07/17/2019
<b>Revision Information:</b>	No data available.
<b>Version #:</b>	1.0
<b>Further Information:</b>	No data available.
<b>Disclaimer:</b>	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.