





**Hazard Statement:** Contains gas under pressure; may explode if heated.  
Causes serious eye irritation.  
Toxic to aquatic life.

**Precautionary Statements**

**Prevention:** Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

**Response:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Storage:** Protect from sunlight. Store in a well-ventilated place.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Hazard(s) not otherwise classified (HNOC):** None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Ethanol, 2-butoxy-	111-76-2	1 - <5%
Alcohols, C9-11, ethoxylated	68439-46-3	1 - <3%
Butane	106-97-8	1 - <5%
Propane	74-98-6	0.1 - <1%

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

### 4. First-aid measures

**Ingestion:** Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

**Inhalation:** Move to fresh air.

**Skin Contact:** Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

#### 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:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

**Notification Procedures:** Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. 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.



## 7. Handling and storage

**Precautions for safe handling:** Avoid contact with eyes. Wash hands thoroughly after 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, 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)
Butane	PEL	50 ppm 240 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	REL	800 ppm 1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	1,000 ppm	US. ACGIH Threshold Limit Values (03 2018)
Propane	TWA	800 ppm 1,900 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	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)
Ammonium hydroxide ((NH4)(OH))	TWA	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	35 ppm	US. ACGIH Threshold Limit Values (2008)
	TWA	25 ppm	US. ACGIH Threshold Limit Values (2008)
Acetic acid, phenylmethyl ester	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)
	TWA	10 ppm	US. ACGIH Threshold Limit Values (2008)
Sodium hydroxide (Na(OH))	Ceiling	2 mg/m3	US. ACGIH Threshold Limit Values (2008)
	Ceiling	2 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	Ceil_Time	2 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
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)
	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)
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-	TWA		10 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- - Inhalable fraction and vapor.	TWA		2 mg/m3	US. ACGIH Threshold Limit Values (2008)
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-	REL		10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)

### 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

**General information:** Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Eye/face protection:** Wear safety glasses with side shields (or goggles).

#### 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:** Avoid contact with eyes. Observe good industrial hygiene practices. When using do not smoke.

## 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.



<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>	2,757.9029 - 4,136.8543 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.



**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: 46,153.85 mg/kg

**Dermal**

**Product:** ATEmix: 17,631.51 mg/kg

**Inhalation**

**Product:** ATEmix: 528.68 mg/l  
ATEmix : 132.17 mg/l

**Repeated dose toxicity**

**Product:** No data available.

**Specified substance(s):**

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  
Alcohols, C9-11, NOAEL (Rat(Female, Male), Oral, 90 d): >= 500 mg/kg Oral Read-across  
ethoxylated based on grouping of substances (category approach), Key study  
Butane LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation  
Experimental result, Key study  
NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 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

**Skin Corrosion/Irritation**

**Product:** No data available.

**Specified substance(s):**



Ethanol, 2-butoxy- in vivo (Rabbit): Irritating Experimental result, Key study

Alcohols, C9-11, ethoxylated in vivo (Rabbit): Not irritant Read-across based on grouping of substances (category approach), Weight of Evidence study

**Serious Eye Damage/Eye Irritation**

**Product:** No data available.  
**Specified substance(s):**

Ethanol, 2-butoxy- Rabbit, 24 - 72 hrs: Irritating

**Respiratory or Skin Sensitization**

**Product:** No data available.

**Specified substance(s):**

Ethanol, 2-butoxy- Skin sensitization:, in vivo (Guinea pig): 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.

**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, 2-butoxy- LC 50 (Oncorhynchus mykiss, 96 h): 1,474 mg/l Experimental result, Key study

Alcohols, C9-11, ethoxylated LC 50 (96 h): 0.9 mg/l  
LC 50 (Oncorhynchus mykiss, 96 h): 5 - 7 mg/l Experimental result, Key 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

##### Aquatic Invertebrates

**Product:** No data available.

**Specified substance(s):**

Ethanol, 2-butoxy- EC 50 (Daphnia magna, 48 h): 1,550 mg/l Experimental result, Key study

Alcohols, C9-11, ethoxylated EC 50 (Daphnia magna, 48 h): 2.5 mg/l Experimental result, Key study

Butane LC 50 (Daphnia sp., 48 h): 69.43 mg/l QSAR QSAR, Key study

#### Chronic hazards to the aquatic environment:

##### Fish

**Product:** No data available.

**Specified substance(s):**

Ethanol, 2-butoxy- NOAEL (Danio rerio): > 100 mg/l Experimental result, Key study

Alcohols, C9-11, ethoxylated NOAEL (Pimephales promelas): 0.16 mg/l Read-across based on grouping of substances (category approach), Weight of Evidence study

##### Aquatic Invertebrates

**Product:** No data available.

**Specified substance(s):**

Ethanol, 2-butoxy- EC 50 (Daphnia magna): 297 mg/l Experimental result, Key study



Alcohols, C9-11, ethoxylated  
EC 10 (Daphnia magna): 134 mg/l Experimental result, Key study  
NOAEL (Daphnia magna): 1.75 mg/l Read-across based on grouping of substances (category approach), Weight of Evidence study

**Toxicity to Aquatic Plants Product:**

No data available.

**Persistence and Degradability**

**Biodegradation**

**Product:**

No data available.

**Specified substance(s):**

Ethanol, 2-butoxy-

90.4 % Detected in water. Experimental result, Key study

Alcohols, C9-11, ethoxylated

100 % (28 d) Detected in water. Read-across based on grouping of substances (category approach), Weight of Evidence study

Butane

100 % (385.5 h) Detected in water. Experimental result, Key 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

**BOD/COD Ratio**

**Product:**

No data available.

**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**

**Product:**

No data available.

**Specified substance(s):**

Alcohols, C9-11, ethoxylated

Pimephales promelas, Bioconcentration Factor (BCF): 237 Aquatic sediment Read-across from supporting substance (structural analogue or surrogate), Key study

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

**Product:**

No data available.

**Specified substance(s):**

Alcohols, C9-11, ethoxylated

Log Kow: 3.3 - 3.73 Yes QSAR, Weight of Evidence study

**Mobility in soil:**

No data available.

**Known or predicted distribution to environmental compartments**

Ethanol, 2-butoxy-

No data available.

Alcohols, C9-11, ethoxylated

No data available.

Butane

No data available.

Propane

No data available.



**Other adverse effects:** Toxic to aquatic organisms.

### 13. Disposal considerations

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws.

**Contaminated Packaging:** No data available.

### 14. Transport information

#### DOT

UN Number: UN 1950  
UN Proper Shipping Name: Aerosols, non-flammable  
Transport Hazard Class(es)  
Class: 2.2  
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, non-flammable  
Transport Hazard Class(es)  
Class: 2  
Label(s): –  
EmS No.: F-D, S-U  
Packing Group: –  
  
Environmental Hazards: No  
Marine Pollutant: Yes  
  
Special precautions for user: Not regulated.

#### IATA

UN Number: UN 1950  
Proper Shipping Name: Aerosols, non-flammable  
Transport Hazard Class(es)  
Class: 2.2  
Label(s): –  
Packing Group: –  
  
Environmental Hazards: No  
Marine Pollutant: Yes



Special precautions for user: Not regulated.  
Cargo aircraft only: Allowed.

## 15. Regulatory information

### US Federal Regulations

**Restrictions on use:** Not known.

**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>
Butane	lbs. 100
Propane	lbs. 100
Ammonium hydroxide (NH <sub>4</sub> )(OH))	lbs. 1000
Sodium hydroxide (Na(OH))	lbs. 1000

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Hazard categories

Fire Hazard  
Sudden Release of Pressure  
Immediate (Acute) Health Hazards  
Flammable aerosol  
Gases under pressure  
Serious Eye Damage/Eye Irritation

#### 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, 2-butoxy-	
Butane	lbs. 100
Propane	lbs. 100
Ammonium hydroxide (NH <sub>4</sub> )(OH))	lbs. 1000
Sodium hydroxide (Na(OH))	lbs. 1000
Cedrene	



**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Ethanol, 2-butoxy-	10000 lbs
Alcohols, C9-11, ethoxylated	10000 lbs
Butane	10000 lbs
Propane	10000 lbs
Ammonium hydroxide (NH <sub>4</sub> OH)	10000 lbs
Acetic acid, phenylmethyl ester	10000 lbs
Sodium hydroxide (NaOH)	10000 lbs
Benzene, 1,1'-oxybis-	10000 lbs
Phenol, 2,6-bis(1,1- dimethylethyl)-4-methyl-	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-butoxy-	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, 2-butoxy-  
Butane

**US. Massachusetts RTK - Substance List**

Chemical Identity

Glycine, N,N-bis(carboxymethyl)-, sodium salt (1:3)

**US. Pennsylvania RTK - Hazardous Substances**

Chemical Identity

Ethanol, 2-butoxy-  
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**

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Not applicable

**Kyoto protocol**

Not applicable

**Inventory Status:**

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.
Korea Existing Chemicals Inv. (KECI):	Not in compliance with the inventory.
Canada NDSL Inventory:	Not in compliance with the inventory.
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	Not 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.
Australia AICS:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Philippines PICCS:	On or 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:** 11/05/2019  
**Revision Information:** No data available.  
**Version #:** 1.1  
**Further Information:** No data available.  
SDS\_US - RE1000008685



**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.