



SAFETY DATA SHEET

1. Identification

Product identifier: Foaming Rug & Upholstery Cleaner

Other means of identification

SDS number: RE1000010628

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

Health Hazards

Skin Corrosion/Irritation Category 2
Serious Eye Damage/Eye Irritation Category 2A

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Extremely flammable aerosol.
Causes skin irritation.
Causes serious eye irritation.

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. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

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. IF ON SKIN: Wash with plenty of water/# If skin irritation occurs: Get medical advice/attention. Specific treatment (see on this label). Take off contaminated clothing.

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, 2-(2-butoxyethoxy)-	112-34-5	1 - <5%
Propane	74-98-6	1 - <5%
Butane	106-97-8	1 - <5%
Ethanol, 2-amino-	141-43-5	1 - <3%
Glycine, N-methyl-N-(1-oxododecyl)-, sodium salt (1:1)	137-16-6	0.1 - <1%
Morpholine	110-91-8	0.1 - <1%
Ammonium hydroxide ((NH4)(OH))	1336-21-6	0.1 - <1%
1-Dodecanol	112-53-8	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: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Get medical 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. See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures: Dike for later disposal. 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: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

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. Avoid contact with skin.

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-(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)
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)
Butane	TWA	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	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)
Ethanol, 2-amino-	STEL	6 ppm 15 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	TWA	3 ppm 8 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL	39 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	97 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)
	AN ESL	2.8 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	STEL	6 ppm 15 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	3 ppm 6 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	STEL	6 ppm 15 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	6 ppm 15 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	REL	3 ppm 8 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA PEL	3 ppm 8 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	TWA	3 ppm 8 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	6 ppm	US. ACGIH Threshold Limit Values (2008)
	TWA	3 ppm	US. ACGIH Threshold Limit Values (2008)
	Morpholine	REL	20 ppm 70 mg/m3



			(2005)
	TWA	20 ppm	US. ACGIH Threshold Limit Values (2008)
	ST ESL	36 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	PEL	20 ppm 70 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA PEL	20 ppm 70 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	STEL	30 ppm 105 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	AN ESL	11 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	10 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA	20 ppm 70 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	30 ppm 105 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	30 ppm 105 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	30 ppm 105 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	AN ESL	40 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA	20 ppm 70 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
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)
Ethanol, 2,2'-iminobis-	REL	3 ppm 15 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	AN ESL	7 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA	3 ppm 15 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA PEL	0.46 ppm 2 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	ST ESL	97 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Ethanol, 2,2'-iminobis- - Inhalable fraction and vapor.	TWA	1 mg/m3	US. ACGIH Threshold Limit Values (2009)
Ethanol, 2,2'-iminobis-	TWA	3 ppm 15 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
Ethanol, 2,2',2''-nitrilotris-	TWA PEL	5 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	ST ESL	50 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (2008)
	AN ESL	5 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
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)
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)
	Ceiling		2 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	Ceiling		2 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
Sodium hydroxide (Na(OH)) - Particulate.	AN ESL		2 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL		20 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Ethanol, 2-methoxy-	TWA	0.1 ppm		US. ACGIH Threshold Limit Values (2008)
	REL	0.1 ppm	0.3 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	25 ppm	80 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	TWA	25 ppm	80 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA PEL	5 ppm	16 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	ST ESL		50 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL		16 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	PEL	25 ppm	80 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	AN ESL		5 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL		160 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
1,2-Ethanediamine	TWA	10 ppm		US. ACGIH Threshold Limit Values (2008)
	TWA PEL	10 ppm	25 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	PEL	10 ppm	25 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	10 ppm	25 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	AN ESL		25 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)
	REL	10 ppm	25 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	ST ESL		250 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA	10 ppm	25 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
Morpholine, 4-ethyl-	REL	5 ppm	23 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	5 ppm	23 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	5 ppm	23 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	TWA PEL	5 ppm	23 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	PEL	20 ppm	94 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	AN ESL		24 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)



	TWA	5 ppm	US. ACGIH Threshold Limit Values (2008)
	AN ESL	5.1 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	51 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	240 µg/m3	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)
Ethanol, 2-methoxy- (2-Methoxyacetic acid: Sampling time: End of shift at end of work week.)	1 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: Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

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. Wash contaminated clothing before reuse. Avoid contact with skin. Wash hands before breaks and immediately after handling the product.

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:	4,826.3301 - 6,205.2815 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: 90,171.4 mg/kg

Dermal
Product: ATEmix: 208,246.56 mg/kg

Inhalation
Product: ATEmix: 109.88 mg/l
ATEmix : 9.61 mg/l

Repeated dose toxicity

Product: No data available.

Specified substance(s):

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

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

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

Ethanol, 2-amino-
NOAEL (Rat(Female, Male), Oral, > 75 d): 300 mg/kg Oral Experimental result, Key study
NOAEL (Rat(Female, Male), Inhalation): 10 mg/m3 Inhalation Experimental result, Key study
NOAEL (Rat(Female, Male), Inhalation): 150 mg/m3 Inhalation Experimental result, Key study

Glycine, N-methyl-N-(1-oxododecyl)-, sodium salt (1:1)
NOAEL (Rat(Female, Male), Oral, >= 91 d): 30 mg/kg Oral Experimental result, Key study

Morpholine
NOAEL (Rat(Female, Male), Inhalation): 36 ppm(m) Inhalation Experimental result, Key study
LOAEL (Rat(Female), Oral, 56 d): 500 mg/kg Oral Experimental result, Key study

1-Dodecanol
NOAEL (Rat(Male), Oral, 41 - 54 d): < 100 mg/kg Oral Experimental result, Key study
NOAEL (Rat(Female), Oral, 13 Weeks): 1,243 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Key study
NOAEL (Rat(Female, Male), Oral, 26 Weeks): 1,000 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Key



study
NOAEL (Rat(Female, Male), Oral, 41 - 54 d): 2,000 mg/kg Oral Experimental result, Key study
NOAEL (Rat(Male), Oral, 13 Weeks): 1,127 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Key study

Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

Ethanol, 2-(2-butoxyethoxy)- in vivo (Rabbit): Not irritant Experimental result, Supporting study

Ethanol, 2-amino- in vivo (Rabbit): Corrosive Experimental result, Key study

Glycine, N-methyl-N-(1-oxododecyl)-, sodium salt (1:1) Assessment Irritating
in vivo (Rabbit): Not irritant Experimental result, Key study

Morpholine in vivo (Rabbit): Corrosive Experimental result, Key study

1-Dodecanol in vivo (Rabbit): Moderately irritating Experimental result, Supporting study
in vivo (Human): Not irritant Experimental result, Key study
(Rabbit): Not irritant Experimental result, Supporting study

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

Ethanol, 2-(2-butoxyethoxy)- Rabbit, 24 - 72 hrs: Highly irritating

Glycine, N-methyl-N-(1-oxododecyl)-, sodium salt (1:1) Rabbit, 24 - 72 hrs: Irritating

1-Dodecanol Rabbit, 24 - 72 hrs: Not irritating
Rabbit, 24 hrs: Irritating
Rabbit, 24 - 72 hrs: Not irritating

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

Ethanol, 2-(2-butoxyethoxy)- Skin sensitization:, in vivo (Guinea pig): Non sensitising

Ethanol, 2-amino- Skin sensitization:, in vivo (Guinea pig): Non sensitising

Glycine, N-methyl-N-(1-oxododecyl)-, sodium salt (1:1) Skin sensitization:, in vivo (Guinea pig): Non sensitising

Morpholine Skin sensitization:, in vivo (Guinea pig): Non sensitising

1-Dodecanol 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-(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

Propane LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study

Butane LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study

Ethanol, 2-amino- LC 50 (Cyprinus carpio, 96 h): 349 mg/l Experimental result, Key study

Morpholine LC 50 (Oncorhynchus mykiss, 96 h): 180 mg/l Experimental result, Key study

Ammonium hydroxide LC 50 (Western mosquitofish (Gambusia affinis), 96 h): 15 mg/l Mortality

((NH₄)(OH)) LC 50 (Fathead minnow (Pimephales promelas), 48 h): 7 mg/l Mortality

1-Dodecanol LC 50 (Pimephales promelas, 96 h): 1.01 mg/l Experimental result, Key study

NOAEL (Oncorhynchus mykiss, 96 h): >= 1 mg/l Not specified, Supporting study

LC 50 (Oncorhynchus mykiss, 96 h): > 1 mg/l Not specified, Supporting study

LC 50 (Fathead minnow (Pimephales promelas), 96 h): 1.01 mg/l Mortality



Aquatic Invertebrates

Product:	No data available.
Specified substance(s):	
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
Ethanol, 2-amino-	EC 50 (Daphnia magna, 48 h): 65 mg/l Experimental result, Key study
Glycine, N-methyl-N-(1-oxododecyl)-, sodium salt (1:1)	NOAEL (Daphnia magna, 48 h): 5 mg/l Experimental result, Key study LC 50 (Daphnia magna, 48 h): 29.7 mg/l Experimental result, Key study
Morpholine	EC 50 (Daphnia magna, 48 h): 45 mg/l Experimental result, Key study
Ammonium hydroxide ((NH ₄)(OH))	LC 50 (Water flea (Ceriodaphnia dubia), 48 h): > 0 - 10 mg/l Mortality
1-Dodecanol	EC 50 (Nitokra spinipes, 96 h): 1 mg/l Experimental result, Supporting study EC 50 (Brachionus calyciflorus, 48 h): 0.88 mg/l Experimental result, Supporting study EC 100 (Daphnia magna, 48 h): 1,000 mg/l Experimental result, Supporting study EC 50 (Daphnia magna, 48 h): 320 mg/l Experimental result, Supporting study EC 50 (48 h): 0.765 mg/l Experimental result, Key study

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Specified substance(s):	
Ethanol, 2-amino-	LOAEL (Oryzias latipes): 3.55 mg/l Experimental result, Key study LC 50 (Oryzias latipes): > 100 mg/l Experimental result, Supporting study NOAEL (Oryzias latipes): 1.24 mg/l Experimental result, Key study

Aquatic Invertebrates

Product:	No data available.
Specified substance(s):	
Ethanol, 2-amino-	EC 50 (Daphnia magna): 2.5 mg/l Experimental result, Key study
Morpholine	EC 50 (Daphnia magna): 12 mg/l Experimental result, Key study NOAEL (Daphnia magna): 5 mg/l Experimental result, Key study
1-Dodecanol	LOAEL (Daphnia magna): 3 mg/l Experimental result, Supporting study NOAEL (Daphnia magna): 14 µg/l Experimental result, Key study EC 20 (Daphnia magna): 34 µg/l Experimental result, Key study LOAEL (Daphnia magna): 95 µg/l Experimental result, Key study NOAEL (Daphnia magna): 1 mg/l Experimental result, Supporting study

Toxicity to Aquatic Plants

Product:	No data available.
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Persistence and Degradability

Biodegradation

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



Ethanol, 2-(2-butoxyethoxy)-	85 % (28 d) 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
Butane	100 % (385.5 h) Detected in water. Experimental result, Key study 50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study
Ethanol, 2-amino-	> 90 % (21 d) Detected in water. Experimental result, Key study
Glycine, N-methyl-N-(1-oxododecyl)-, sodium salt (1:1)	82 % (28 d) Detected in water. Experimental result, Key study
Morpholine	> 90 % (24 h) Sediment Experimental result, Key study 80 - 94 % (24 h) Sediment Experimental result, Key study 34.1 % Detected in water. Experimental result, Key study > 99 % (24 h) Sediment Experimental result, Key study
1-Dodecanol	41.01 % (31 d) Detected in water. Experimental result, Supporting study 99.95 % Sediment Experimental result, Key study 0.8 % (48 h) Sediment Experimental result, Supporting study 73.9 % (48 h) Sediment Experimental result, Supporting study 66 % (28 d) Detected in water. Experimental result, Supporting study

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Ethanol, 2-amino-	Bioconcentration Factor (BCF): 9.2 Aquatic sediment QSAR, Key study
Morpholine	Cyprinus carpio, Bioconcentration Factor (BCF): < 2.8 Aquatic sediment Experimental result, Key study
1-Dodecanol	Bioconcentration Factor (BCF): 3,801 Aquatic sediment Estimated by calculation, Supporting study

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Glycine, N-methyl-N-(1-oxododecyl)-, sodium salt (1:1)	Log Kow: 0.37
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Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Ethanol, 2-(2-butoxyethoxy)-	No data available.
Propane	No data available.
Butane	No data available.
Ethanol, 2-amino-	No data available.
Glycine, N-methyl-N-(1-oxododecyl)-, sodium salt (1:1)	No data available.



Morpholine No data available.
Ammonium hydroxide No data available.
((NH₄)(OH))
1-Dodecanol 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



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>
Propane	lbs. 100
Butane	lbs. 100
Morpholine	lbs. 100
Ammonium hydroxide ((NH4)(OH))	lbs. 1000
Ethanol, 2,2'-iminobis-	lbs. 100
Sodium hydroxide (Na(OH))	lbs. 1000
1,2-Ethanediamine	lbs. 5000
Morpholine, 4-ethyl-	lbs. 100

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

- Fire Hazard
- Immediate (Acute) Health Hazards
- Flammable aerosol
- Skin Corrosion/Irritation
- Serious Eye Damage/Eye Irritation

SARA 302 Extremely Hazardous Substance

<u>Chemical Identity</u>	<u>Reportable quantity</u>	<u>Threshold Planning Quantity</u>
1,2-Ethanediamine	lbs. 5000	lbs. 10000

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Ethanol, 2-(2-butoxyethoxy)-	
Propane	lbs. 100
Butane	lbs. 100
Morpholine	lbs. 100
Ammonium hydroxide ((NH4)(OH))	lbs. 1000
Ethanol, 2,2'-iminobis-	lbs. 100
Ethanol, 2-butoxy-	
Sodium hydroxide (Na(OH))	lbs. 1000
Ethanol, 2-methoxy-	
1,2-Ethanediamine	lbs. 5000
Morpholine, 4-ethyl-	lbs. 100

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
1,2-Ethanediamine	lbs
Ethanol, 2-(2-butoxyethoxy)-	10000 lbs
Propane	10000 lbs
Butane	10000 lbs
Ethanol, 2-amino-	10000 lbs



Glycine, N-methyl-N-(1-oxododecyl)-, sodium salt (1:1)	10000 lbs
Morpholine	10000 lbs
Ammonium hydroxide ((NH4)(OH))	10000 lbs
1-Dodecanol	10000 lbs
Ethanol, 2,2'-iminobis-	10000 lbs
Ethanol, 2,2',2''-nitrilotris-	10000 lbs
Ethanol, 2-butoxy-	10000 lbs
Sodium hydroxide (Na(OH))	10000 lbs
Ethanol, 2-methoxy-	10000 lbs
Morpholine, 4-ethyl-	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

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

Ethanol, 2,2'-iminobis-	Carcinogenic. 07 2012
Ethanol, 2-methoxy-	Developmental toxin. 03 2008
Ethanol, 2-methoxy-	Male reproductive toxin. 03 2008
1,6-Octadiene, 7-methyl-3-methylene-	Carcinogenic. 03 2015
Cyclohexanone, 5-methyl-2-(1-methylethylidene)-, (5R)-	Carcinogenic. 04 2014

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Ethanol, 2-(2-butoxyethoxy)-
Propane
Butane
Ethanol, 2-amino-

US. Massachusetts RTK - Substance List

Chemical Identity

Glycine, N,N-bis(carboxymethyl)-, sodium salt (1:3)
1,2-Ethanediamine

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Ethanol, 2-(2-butoxyethoxy)-
Propane
Butane
Ethanol, 2-amino-



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:	Not 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:	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.
Ontario Inventory:	Not 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: 08/22/2019

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.