



SAFETY DATA SHEET

1. Identification

Product identifier: TERAND CHALKBOARD CLEANER - WATER-BASED

Other means of identification

SDS number: RE1000009104

Recommended restrictions

Product use: Cleaner

Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name: CPC
Address: 1000 INTEGRAM DRIVE
PACIFIC, MO 63069
Telephone: 1-800-327-1835
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 (%)*
Butane	106-97-8	1 - <5%
Methanol	67-56-1	1 - <5%
Propane	74-98-6	1 - <5%
Ethanol	64-17-5	1 - <5%
Ethanol, 2-butoxy-	111-76-2	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: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/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: 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
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/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA PEL	800 ppm 1,900 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	ST ESL	66,000 µg/m ³	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)
Methanol	TWA	200 ppm 260 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	250 ppm 325 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	AN ESL	2,100 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	1,600 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	3,900 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	3,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	STEL	250 ppm 325 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	250 ppm	US. ACGIH Threshold Limit Values (2008)
	STEL	250 ppm 325 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	TWA	200 ppm 260 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	Ceiling	1,000 ppm	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	TWA PEL	200 ppm 260 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	TWA	200 ppm	US. ACGIH Threshold Limit Values (2008)
	STEL	250 ppm 325 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	200 ppm 260 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	200 ppm 260 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Propane	REL	1,000 ppm 1,800 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	1,000 ppm 1,800 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA PEL	1,000 ppm 1,800 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	TWA	1,000 ppm 1,800 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	TWA	1,000 ppm 1,800 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Ethanol	TWA PEL	1,000 ppm 1,900 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	REL	1,000 ppm 1,900 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	1,000 ppm 1,900 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	1,000 ppm 1,900 mg/m ³	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-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)
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)
Morpholine	REL	20 ppm	70 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (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)
Stoddard solvent	TWA	100 ppm		US. ACGIH Threshold Limit Values (2008)
	REL		350 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	500 ppm	2,900 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	Ceil_Time		1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA PEL	100 ppm	525 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	AN ESL		350 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA	100 ppm	525 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	TWA	100 ppm	525 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)



	ST ESL	3,500 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	670 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	67 ppb	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
Methanol (methanol: Sampling time: End of shift.)	15 mg/l (Urine)	ACGIH BEL (03 2013)
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:** 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.
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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: 41,649.12 mg/kg

Dermal

Product: ATEmix: 87,763.16 mg/kg

Inhalation

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

Specified substance(s):

Butane LC 50 (Mouse): 1,237 mg/l
Methanol LC 50: < 1 mg/l
LC 50 (Rat): 128.2 mg/l
Propane LC 50 (Mouse): 1,237 mg/l
Ethanol LC 50 (Rat): 124.7 mg/l
LC 50: > 5 mg/l
Ethanol, 2-butoxy- LC 50: < 5 mg/l
LC 50: < 20 mg/l

Repeated dose toxicity

Product: No data available.

Specified substance(s):

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
Methanol LOAEL (Rat(Male), Inhalation, 1 - 6 Weeks): 13.3 mg/l Inhalation
Experimental result, Supporting 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
Ethanol NOAEL (Rat(Male), Oral, 7 - 14 Weeks): 10 %(m) Oral Experimental result,
Key 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

Skin Corrosion/Irritation



Product: No data available.

Specified substance(s):

Methanol in vivo (Rabbit): Not irritant Experimental result, Key study

Ethanol in vivo (Rabbit): Not irritant Experimental result, Key study

Ethanol, 2-butoxy- in vivo (Rabbit): Irritating 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-butoxy- Rabbit, 24 - 72 hrs: Irritating

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

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

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

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.

Specified substance(s):

Methanol Causes damage to organs.

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):

Butane	LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study
Methanol	EC 50 (Lepomis macrochirus, 96 h): 12,700 mg/l Experimental result, Key study
Propane	LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study
Ethanol	LC 50 (Pimephales promelas, 96 h): 15.3 g/l Experimental result, Key study
Ethanol, 2-butoxy-	LC 50 (Oncorhynchus mykiss, 96 h): 1,474 mg/l Experimental result, Key study

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Butane	LC 50 (Daphnia sp., 48 h): 69.43 mg/l QSAR QSAR, Key study
Methanol	EC 50 (Daphnia magna, 96 h): 18,260 mg/l Experimental result, Key study
Ethanol	LC 50 (Ceriodaphnia dubia, 48 h): 5,012 mg/l Experimental result, Key study
Ethanol, 2-butoxy-	EC 50 (Daphnia magna, 48 h): 1,550 mg/l Experimental result, Key study

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Methanol	EC 50 (Oryzias latipes): 9,164 mg/l Experimental result, Supporting study
Ethanol	NOAEL (Oryzias latipes): 7,900 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study
Ethanol, 2-butoxy-	NOAEL (Danio rerio): > 100 mg/l Experimental result, Key study

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Methanol	NOAEL (Daphnia magna): 122 mg/l Experimental result, Supporting study
Ethanol	LC 50 (Daphnia magna): 454 mg/l Experimental result, Key study



NOAEL (Daphnia magna): 9.6 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

Toxicity to Aquatic Plants

Product:

No data available.

Persistence and Degradability

Biodegradation

Product:

No data available.

Specified substance(s):

Butane

100 % (385.5 h) Detected in water. Experimental result, Key study
50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study

Methanol

97 % 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

Ethanol

95 % Detected in water. Experimental result, Key study

Ethanol, 2-butoxy-

90.4 % 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):

Methanol

Leuciscus idus, Bioconcentration Factor (BCF): < 10 Aquatic sediment
Experimental result, Supporting study

Ethanol

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

Butane

No data available.

Methanol

No data available.

Propane

No data available.

Ethanol

No data available.

Ethanol, 2-butoxy-

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>
Butane	lbs. 100
Methanol	lbs. 5000
Propane	lbs. 100
Ethanol	lbs. 100
Sodium hydroxide (Na(OH))	lbs. 1000
2-Propanol, 2-methyl-	lbs. 100
Morpholine	lbs. 100
1,3-Benzodioxole, 5-(2- propen-1-yl)-	lbs. 100
1,2-Ethanediamine	lbs. 5000
Morpholine, 4-ethyl-	lbs. 100

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

- Fire Hazard
- Flammable aerosol

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>
Butane	lbs. 100
Methanol	lbs. 5000
Propane	lbs. 100
Ethanol	lbs. 100
Ethanol, 2-butoxy-	
Sodium hydroxide (Na(OH))	lbs. 1000
2-Propanol, 2-methyl-	lbs. 100
Morpholine	lbs. 100
1,3-Benzodioxole, 5-(2- propen-1-yl)-	lbs. 100
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
Butane	10000 lbs
Methanol	10000 lbs
Propane	10000 lbs
Ethanol	10000 lbs
Ethanol, 2-butoxy-	10000 lbs
Sodium hydroxide (Na(OH))	10000 lbs
2-Propanol, 2-methyl-	10000 lbs
Morpholine	10000 lbs
Stoddard solvent	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>
Methanol	lbs	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.

Methanol	Developmental toxin. 03 2012
1,3-Benzodioxole, 5-(2-propen-1-yl)-	Carcinogenic. 05 2011
Ethanol, 2-methoxy-	Developmental toxin. 03 2008
Ethanol, 2-methoxy-	Male reproductive toxin. 03 2008

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

Chemical Identity

Butane
Methanol
Propane
Ethanol
Ethanol, 2-butoxy-

US. Massachusetts RTK - Substance List

Chemical Identity

1,3-Benzodioxole, 5-(2-propen-1-yl)-
Glycine, N,N-bis(carboxymethyl)-, sodium salt (1:3)

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Butane
Methanol
Propane
Ethanol

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:	Not in compliance with the inventory.
EINECS, ELINCS or NLP:	Not in compliance with the inventory.
Japan (ENCS) List:	On or 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:	08/05/2019
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.