

SAFETY DATA SHEET

1. Identification

Product identifier: 1ST AYD ALL SURFACE CLEANER -6L

Other means of identification

SDS number: RE1000025346

Recommended restrictions

Product use: Cleaner

Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name: 1ST AYD. CORPORATION
Address: 1325 GATEWAY DRIVE
ELGIN,IL 60124
Telephone: 847-622-0001
Fax:

Emergency telephone number: 1-800-255-3924

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable aerosol Category 1

Health Hazards

Serious Eye Damage/Eye Irritation Category 1

Environmental Hazards

Acute hazards to the aquatic environment Category 3

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Extremely flammable aerosol.
Causes serious eye damage.
Harmful to aquatic life.

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. 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. Immediately call a POISON CENTER/doctor.
Storage:	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
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 (HNO):	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	3 - <5%
Butane	106-97-8	1 - <5%
Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, sodium salt (1:4)	64-02-8	1 - <5%
Propane	74-98-6	0.1 - <1%
Sulfuric acid monododecyl ester sodium salt (1:1)	151-21-3	0.1 - <1%
Sodium hydroxide (Na(OH))	1310-73-2	0.1 - <1%
Ammonium hydroxide ((NH ₄)(OH))	1336-21-6	0 - <0.1%
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-	76-22-2	0 - <0.1%
Acetic acid, phenylmethyl ester	140-11-4	0 - <0.1%
1,4-Dioxane	123-91-1	0 - <0.1%
Ethylene Oxide	75-21-8	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:	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. Call a physician or poison control center immediately.

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. 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. 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: Do not get in 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)
	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)
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
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)
Sodium hydroxide (Na(OH))		Ceiling	2 mg/m3
	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)
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)
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-	TWA PEL		2 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	REL		2 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	2 ppm		US. ACGIH Threshold Limit Values (2008)
	STEL	3 ppm		US. ACGIH Threshold Limit Values (2008)
	PEL		2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA		2 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	TWA		2 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	ST ESL		3.3 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL		0.33 ppb	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)
	AN ESL		2 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
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)
1,4-Dioxane	TWA	25 ppm	90 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	AN ESL		20 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL		200 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL		720 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL		72 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA	25 ppm	90 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	Ceil_Time	1 ppm	3.6 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	20 ppm		US. ACGIH Threshold Limit Values (2008)
	PEL	100 ppm	360 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA PEL	0.28 ppm	1.0 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (02 2012)
Ethylene Oxide	Ceil_Time	5 ppm	9 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	1 ppm		US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (02 2006)
	STEL	5 ppm		US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (02 2006)
	OSHA_ACT	0.5 ppm		US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (02 2006)

	STEL	5 ppm	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	AN ESL	2 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	REL	0.1 ppm 0.18 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	1 ppm	US. ACGIH Threshold Limit Values (2008)
	TWA A LV	0.5 ppm	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	TWA PEL	1 ppm 2 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	ST ESL	10 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA	1 ppm	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	5 ppm	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	ST ESL	20 µg/m3	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)
Ethylene Oxide (S-(2-hydroxyethyl) mercapturic acid (HEMA): Sampling time: End of shift.)	5 µg/g (Creatinine in urine)	ACGIH BEL (03 2018)
Ethylene Oxide (N-(2-hydroxyethyl)-valine (HEV) hemoglobin adducts: Sampling time: Not critical.)	5000 pmol/g (Hemoglobin adducts)	ACGIH BEL (03 2018)

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 a full-face respirator, if needed. Wear safety glasses with side shields (or goggles) and a 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:

Do not get in 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.
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:	2,757.9029 - 4,136.8544 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.
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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: 9,247.19 mg/kg

Dermal

Product: ATEmix: 11,030.39 mg/kg

Inhalation

Product: ATEmix: 412.37 mg/l
ATEmix : 31.12 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, ethoxylated Butane	NOAEL (Rat(Female, Male), Oral, 90 d): >= 500 mg/kg Oral Read-across based on grouping of substances (category approach), Key study 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
Glycine, N,N'-1,2- ethanediybis[N- (carboxymethyl)-, sodium salt (1:4)	NOAEL (Rat(Female, Male), Oral, 103 Weeks): >= 500 mg/kg Oral Read- across from supporting substance (structural analogue or surrogate), Key study LOAEL (Rat(Male), Inhalation, 1 - 5 d): 30 mg/m3 Inhalation Read-across from supporting substance (structural analogue or surrogate), 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
Sulfuric acid monododecyl ester sodium salt (1:1)	NOAEL (Rat(Female, Male), Oral, 13 Weeks): 482 mg/kg Oral Experimental result, Supporting study NOAEL (Rat(Female, Male), Oral, 2 yr): 0.15 %(m) Oral Experimental result, Supporting study

Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-Acetic acid, phenylmethyl ester	NOAEL (Rat(Female, Male), Dermal): 250 mg/kg Dermal Experimental result, Weight of Evidence study 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
1,4-Dioxane	NOAEL (Rat(Male), Oral, 716 d): 9.6 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female), Oral, 716 d): 19 mg/kg Oral Experimental result, Key study LOAEL (Rat(Female, Male), Inhalation, 13 Weeks): 100 ppm(m) Inhalation Experimental result, Not specified
Ethylene Oxide	NOAEL (Mouse(Female, Male), Inhalation, 10 - 11 Weeks): 10 ppm(m) Inhalation Experimental result, Weight of Evidence 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
Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, sodium salt (1:4)	in vivo (Rabbit): Not irritant Experimental result, Key study
Sulfuric acid monododecyl ester sodium salt (1:1)	in vivo (Rabbit): Irritating Experimental result, Key study
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-	in vivo (Rabbit): Not irritant Experimental result, Supporting study
Acetic acid, phenylmethyl ester	in vivo (Rabbit): Not irritant Experimental result, Key study
Ethylene Oxide	in vivo (Rabbit): Irritating Experimental result, Supporting study

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

Ethanol, 2-butoxy-	Rabbit, 24 - 72 hrs: Irritating
Sulfuric acid monododecyl ester sodium salt (1:1)	Rabbit, 24 - 72 hrs: Irritating.
Sodium hydroxide (Na(OH))	Corrosive Rabbit, 2 d: 10% Sodium Hydroxide- Category 1; 0.5% Sodium Hydroxide-Slightly irritating to eyes
Ethylene Oxide	Rabbit, 48 hrs: Irritating

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

Ethanol, 2-butoxy-	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Glycine, N,N'-1,2-ethanediybis[N-(carboxymethyl)-, sodium salt (1:4)	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Sulfuric acid monododecyl ester sodium salt (1:1)	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Acetic acid, phenylmethyl ester	Skin sensitization:, in vivo (Guinea pig): Sensitising
1,4-Dioxane	Skin sensitization:, in vivo (Guinea pig): Non sensitising

Carcinogenicity

Product: No data available.

Specified substance(s):

1,4-Dioxane	Suspect cancer hazard - may cause cancer.
Ethylene Oxide	Potential cancer hazard.

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):

1,4-Dioxane	Respiratory tract irritation. - Category 3 with respiratory tract irritation.
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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
Glycine, N,N'-1,2-ethanediybis[N-(carboxymethyl)-, sodium salt (1:4)	LC 50 (Lepomis macrochirus, 96 h): 121 mg/l Experimental result, Key study NOAEL (Lepomis macrochirus, 96 h): 88 mg/l Experimental result, Key study
Propane	LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study
Sulfuric acid monododecyl ester sodium salt (1:1)	LC 50 (Pimephales promelas, 96 h): 29 mg/l Experimental result, Key study
Sodium hydroxide (Na(OH))	LC 50 (Western mosquitofish (Gambusia affinis), 96 h): 125 mg/l Mortality LC 50 (Gambusia affinis, 96 h): < 180 mg/l Experimental result, Supporting study
Ammonium hydroxide ((NH4)(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
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-	LC 50 (Pimephales promelas, 96 h): 110 mg/l Experimental result, Weight of Evidence study
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
1,4-Dioxane	NOAEL (Oryzias latipes, 21 d): 100 mg/l Experimental result, Key study LC 50 (Oryzias latipes, 21 d): > 100 mg/l Experimental result, Key study
Ethylene Oxide	LC 50 (Pimephales promelas, 96 h): 84 mg/l Experimental result, 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
Glycine, N,N'-1,2-ethanediybis[N-(carboxymethyl)-, sodium salt (1:4)	EC 50 (Daphnia magna, 24 h): 610 mg/l Experimental result, Key study
Sulfuric acid monododecyl ester sodium salt (1:1)	LC 50 (Daphnia magna, 48 h): 1.8 mg/l Experimental result, Not specified
Sodium hydroxide (Na(OH))	EC 50 (Water flea (Ceriodaphnia dubia), 48 h): 34.59 - 47.13 mg/l Intoxication

Ammonium hydroxide ((NH ₄)(OH))	LC 50 (Water flea (Ceriodaphnia dubia), 48 h): > 0 - 10 mg/l Mortality
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-	LC 50 (48 h): 9.303 mg/l QSAR QSAR, Key study
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
1,4-Dioxane	EC 50 (Daphnia magna, 48 h): > 1,000 mg/l Experimental result, Key study
Ethylene Oxide	LC 50 (Daphnia magna, 48 h): 212 mg/l Experimental result, 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
Glycine, N,N'-1,2-ethanediybis[N-(carboxymethyl)-, sodium salt (1:4)	NOAEL (Danio rerio): >= 25.7 mg/l Read-across from supporting substance (structural analogue or surrogate), Key study
Sulfuric acid monododecyl ester sodium salt (1:1)	NOAEL (Pimephales promelas): > 1.357 mg/l Experimental result, Key study
1,4-Dioxane	NOAEL (Pimephales promelas): > 103 mg/l Experimental result, Key study

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

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
Alcohols, C9-11, ethoxylated	NOAEL (Daphnia magna): 1.75 mg/l Read-across based on grouping of substances (category approach), Weight of Evidence study
Glycine, N,N'-1,2-ethanediybis[N-(carboxymethyl)-, sodium salt (1:4)	NOAEL (Daphnia magna): 25 mg/l Read-across from supporting substance (structural analogue or surrogate), Key study
Sulfuric acid monododecyl ester sodium salt (1:1)	NOAEL (Ceriodaphnia dubia): 1.2 mg/l Experimental result, Key study
1,4-Dioxane	NOAEL (Daphnia magna): 1,000 mg/l Experimental result, Key study

Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s):

Sulfuric acid monododecyl ester sodium salt (1:1) EC 50 (Green algae (*Selenastrum capricornutum*), 48 h): 706 - 5,918 mg/l Mortality

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 50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study
Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, sodium salt (1:4)	90 - 100 % (28 d) Detected in water. Read-across from supporting substance (structural analogue or surrogate), 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
Sulfuric acid monododecyl ester sodium salt (1:1)	94 % (28 d) Detected in water. Experimental result, Supporting study 95 % Detected in water. Experimental result, Key study
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-	77 % Detected in water. Experimental result, Key study
Acetic acid, phenylmethyl ester	100 % (28 d) Detected in water. Experimental result, Key study
1,4-Dioxane	< 5 % (60 d) Sediment Experimental result, Key study < 10 % (29 d) Detected in water. Experimental result, Key study
Ethylene Oxide	93 - 98 % (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):

Alcohols, C9-11, ethoxylated	Pimephales promelas, Bioconcentration Factor (BCF): 237 Aquatic sediment Read-across from supporting substance (structural analogue or surrogate), Key study
Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, sodium salt (1:4)	Lepomis macrochirus, Bioconcentration Factor (BCF): 1.8 Aquatic sediment Experimental result, Key study
Sulfuric acid monododecyl ester sodium salt (1:1)	Carp (<i>Cyprinus carpio</i>), Bioconcentration Factor (BCF): 50 (Flow through)

Acetic acid, phenylmethyl ester	Bioconcentration Factor (BCF): 8 Aquatic sediment Estimated by calculation, Key study
1,4-Dioxane	Cyprinus carpio, Bioconcentration Factor (BCF): 0.3 - 0.7 Aquatic sediment Experimental result, 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.
Glycine, N,N'-1,2-ethanediybis[N-(carboxymethyl)-, sodium salt (1:4)	No data available.
Propane	No data available.
Sulfuric acid monododecyl ester sodium salt (1:1)	No data available.
Sodium hydroxide (Na(OH))	No data available.
Ammonium hydroxide ((NH4)(OH))	No data available.
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-	No data available.
Acetic acid, phenylmethyl ester	No data available.
1,4-Dioxane	No data available.
Ethylene Oxide	No data available.

Other adverse effects: Harmful 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, 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)

<u>Chemical Identity</u>	<u>OSHA hazard(s)</u>
Ethylene Oxide	Eye irritation respiratory tract irritation Skin irritation Skin sensitization Acute toxicity Cancer Central nervous system Reproductive toxicity Mutagenicity Flammability

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Butane	lbs. 100
Propane	lbs. 100
Sodium hydroxide (Na(OH))	lbs. 1000
Ammonium hydroxide ((NH4)(OH))	lbs. 1000
1,4-Dioxane	lbs. 100
Ethylene Oxide	lbs. 10

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

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

SARA 302 Extremely Hazardous Substance

<u>Chemical Identity</u>	<u>Reportable quantity</u>	<u>Threshold Planning Quantity</u>
Ethylene Oxide	lbs. 10	lbs. 1000

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Ethanol, 2-butoxy-	
Butane	lbs. 100
Propane	lbs. 100
Sodium hydroxide (Na(OH))	lbs. 1000
Ammonium hydroxide ((NH4)(OH))	lbs. 1000
1,4-Dioxane	lbs. 100
Ethylene Oxide	lbs. 10

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Ethylene Oxide	lbs
Ethanol, 2-butoxy-Alcohols, C9-11, ethoxylated	10000 lbs
Butane	10000 lbs
Glycine, N,N'-1,2-ethanediybis[N-(carboxymethyl)-, sodium salt (1:4)	10000 lbs
Propane	10000 lbs
Sulfuric acid monododecyl ester sodium salt (1:1)	10000 lbs
Sodium hydroxide (Na(OH))	10000 lbs
Ammonium hydroxide ((NH4)(OH))	10000 lbs
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-	10000 lbs
Acetic acid, phenylmethyl ester	10000 lbs
1,4-Dioxane	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

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

1,4-Dioxane	Carcinogenic. 05 2011
Ethylene Oxide	Female reproductive toxin. 03 2008

Ethylene Oxide Carcinogenic. 05 2011
Ethylene Oxide Male reproductive toxin. 08 2009
Ethylene Oxide Developmental toxin. 08 2009

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

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

SDS_US - RE1000025346

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
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Issue Date:	07/08/2019
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.