



SAFETY DATA SHEET

1. Identification

Product identifier: CLAIRE RAIN FOREST METERED AIR FRESHENER

Other means of identification

SDS number: RE1000003943

Recommended restrictions

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

Serious Eye Damage/Eye Irritation Category 2A
Specific Target Organ Toxicity - Category 3¹
Single Exposure

Target Organs

1. Narcotic effect.

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 irritation. May cause drowsiness or dizziness. 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. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid release to the environment.
Response:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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. Call a POISON CENTER/doctor if you feel unwell.
Storage:	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Hazard(s) not otherwise classified (HNOC):	None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
2-Propanone	67-64-1	50 - <100%
Propane	74-98-6	10 - <20%
Butane	106-97-8	10 - <20%
Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimethyl-, 2-acetate, (1R,2R,4R)-rel-	125-12-2	1 - <5%
Proprietary		0.1 - <1%
Heptanoic acid, 2-propen-1-yl ester	142-19-8	0.1 - <1%
2H-1-Benzopyran-2-one	91-64-5	0.1 - <1%
Benzoic acid, 2-hydroxy-, hexyl ester	6259-76-3	0.1 - <1%
Acetic acid, phenylmethyl ester	140-11-4	0.1 - <1%
Ethanol, 2,2',2''-nitrotris-	102-71-6	0 - <0.1%
Ethanol, 2,2'-iminobis-	111-42-2	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. 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.
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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.
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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.
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Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No data available.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.
Methods and material for containment and cleaning up:	Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.



Notification Procedures: Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk.

Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer.

7. Handling and storage

Precautions for safe handling: Avoid contact with eyes. Wash hands thoroughly after handling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use.

Conditions for safe storage, including any incompatibilities: Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Aerosol Level 3

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
2-Propanone	STEL	1,000 ppm 2,400 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	750 ppm 1,780 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	PEL	1,000 ppm 2,400 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	250 ppm	US. ACGIH Threshold Limit Values (03 2015)
	TWA	750 ppm 1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	Ceiling	3,000 ppm	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	STEL	500 ppm	US. ACGIH Threshold Limit Values (03 2015)
Propane	TWA PEL	500 ppm 1,200 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	REL	250 ppm 590 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	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)
Butane	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)
	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)
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)
Ethanol, 2,2',2"-nitritoltris-	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, 2,2'-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)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
2-Propanone (acetone: Sampling time: End of shift.)	25 mg/l (Urine)	ACGIH BEL (03 2015)

Appropriate Engineering Controls

No data available.



Individual protection measures, such as personal protective equipment

General information:	Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Eye/face protection:	Wear safety glasses with side shields (or goggles).
Skin Protection	
Hand Protection:	No data available.
Other:	No data available.
Respiratory Protection:	In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.
Hygiene measures:	Avoid contact with eyes. Observe good industrial hygiene practices. When using do not smoke.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	Spray Aerosol
Color:	No data available.
Odor:	No data available.
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
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:	3,102.6408 - 4,481.5922 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: 47,351.75 mg/kg
Dermal Product:	ATEmix: 95,563.05 mg/kg
Inhalation Product:	Not classified for acute toxicity based on available data.



Specified substance(s):

2-Propanone	LC 50 (Rat): 50.1 mg/l
Propane	LC 50 (Mouse): 1,237 mg/l
Butane	LC 50 (Mouse): 1,237 mg/l
Proprietary	LC 50: > 5 mg/l LC 50: > 20 mg/l
2H-1-Benzopyran-2-one	LC 50: > 5 mg/l LC 50: > 20 mg/l
Benzoic acid, 2-hydroxy-, hexyl ester	LC 50: > 5 mg/l
Acetic acid, phenylmethyl ester	LC Lo (Rat): > 0.766 mg/l
Ethanol, 2,2',2''-nitrotris-	LC 0 (Rat): 1.8 mg/m3 LC 50: > 5 mg/l
Ethanol, 2,2'-iminobis-	LC 0 (Rat): 3.35 mg/l LC 50: > 5 mg/l LC 50: > 20 mg/l

Repeated dose toxicity

Product: No data available.

Specified substance(s):

2-Propanone	NOAEL (Rat(Male), Oral, 13 Weeks): 10,000 ppm(m) Oral 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
Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimethyl-, 2-acetate, (1R,2R,4R)-rel-Heptanoic acid, 2-propen-1-yl ester	NOAEL (Rat(Female, Male), Oral, 2 - 13 Weeks): 15 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female, Male), Oral, 28 Weeks): > 233 mg/kg Oral Read-across based on grouping of substances (category approach), Key study NOAEL (Rat(Female, Male), Oral, 28 Weeks): > 2,500 mg/kg Oral Read-across based on grouping of substances (category approach), Key study NOAEL (Rat(Female, Male), Oral, 28 d): 30 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female, Male), Oral, 28 Weeks): > 214 mg/kg Oral Read-across based on grouping of substances (category approach), Key study
2H-1-Benzopyran-2-one	NOAEL (Rat(Male), Inhalation, 104 - 110 Weeks): 42 mg/kg Inhalation Experimental result, Key study NOAEL : 50 mg/kg Oral Experimental result, Key study NOAEL (Rat(Male), Dermal, 104 - 110 Weeks): 42 mg/kg Dermal Experimental result, Key study
Benzoic acid, 2-hydroxy-, hexyl ester	NOAEL (Rat(Female, Male), Oral, 2 yr): 50 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Supporting study



Acetic acid, phenylmethyl ester	NOAEL (Rat(Male), Oral, 13 Weeks): 900 mg/kg Oral Experimental result, Supporting study NOAEL (Rat(Female), Oral, 13 Weeks): 480 mg/kg Oral Experimental result, Supporting study
Ethanol, 2,2',2''-nitrilotris-	NOAEL (Rat(Female, Male), Oral, 91 d): 1,000 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female, Male), Inhalation): 0.5 mg/l Inhalation Experimental result, Key study NOAEL (Rat(Male), Dermal, 90 d): 125 mg/kg Dermal Experimental result, Key study NOAEL (Rat(Female), Dermal, 90 d): 250 mg/kg Dermal Experimental result, Key study
Ethanol, 2,2'-iminobis-	LOAEL (Rat(Female), Oral, 13 Weeks): 14 mg/kg Oral Experimental result, Key study LOAEL (Rat(Female, Male), Dermal, 13 Weeks): 32 mg/kg Dermal Experimental result, Key study NOAEL (Rat(Female, Male), Inhalation): 3 mg/m ³ Inhalation Experimental result, Key study

Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

2-Propanone	in vivo (Rabbit): Not irritant Experimental result, Supporting study
Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimethyl-, 2-acetate, (1R,2R,4R)-rel-	in vivo (Rabbit): Irritating Experimental result, Key study in vivo (Rabbit): Irritating Experimental result, Key study in vivo (Rabbit): Irritating Experimental result, Key study in vivo (Rabbit): Irritating Experimental result, Key study in vivo (Rabbit): Irritating Experimental result, Key study in vivo (Rabbit): Irritating Experimental result, Key study
Heptanoic acid, 2-propen-1-yl ester	in vivo (Rabbit): Not irritant Experimental result, Supporting study validated "in vitro" test method Not irritant Experimental result, Key study
2H-1-Benzopyran-2-one	in vivo (Rabbit): Not irritant Experimental result, Key study
Benzoic acid, 2-hydroxy-, hexyl ester	in vivo Irritating Experimental result, Key study
Acetic acid, phenylmethyl ester	in vivo (Rabbit): Not irritant Experimental result, Key study
Ethanol, 2,2',2''-nitrilotris-	in vivo (Rabbit): Not irritant Experimental result, Key study

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

2-Propanone	Irritating. Rabbit, 24 hrs: Minimum grade of severe eye irritant
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Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimethyl-, 2-acetate, (1R,2R,4R)-rel-	Rabbit, 24 - 72 hrs: Not irritating Rabbit: Not irritating Rabbit, 1 hrs: Not irritating Rabbit, 48 - 72 hrs: Not irritating Rabbit, 24 hrs: Not irritating Rabbit, 1 hrs: Not irritating Rabbit, 1 hrs: Not irritating
Heptanoic acid, 2-propen-1-yl ester	Rabbit, 24 - 72 hrs: Not irritating Rabbit, 24 - 72 hrs: Not irritating
Benzoic acid, 2-hydroxy-, hexyl ester	Rabbit: Not irritating

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

2-Propanone	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Heptanoic acid, 2-propen-1-yl ester	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Benzoic acid, 2-hydroxy-, hexyl ester	Skin sensitization:, in vivo (Human): Non sensitising
Acetic acid, phenylmethyl ester	Skin sensitization:, in vivo (Guinea pig): Sensitising
Ethanol, 2,2',2"-nitrilotris-	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Ethanol, 2,2'-iminobis-	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):

2-Propanone Inhalation - vapor: Narcotic effect. - Category 3 with narcotic effects.



Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.
Specified substance(s):
Ethanol, 2,2'-iminobis- Category 2

Target Organs

Specific Target Organ Toxicity - Single Exposure: Narcotic effect.

Aspiration Hazard

Product: No data available.

Specified substance(s):
Proprietary May be fatal if swallowed and enters airways.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

2-Propanone	LC 50 (Oncorhynchus mykiss, 96 h): 5,540 mg/l Experimental result, Key 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
Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimethyl-, 2-acetate, (1R,2R,4R)-rel-	LC 100 (Danio rerio, 96 h): 25 mg/l Experimental result, Key study LC 0 (Danio rerio, 48 h): 10 mg/l Experimental result, Key study LC 100 (Danio rerio, 48 h): 25 mg/l Experimental result, Key study LC 0 (Danio rerio, 96 h): 10 mg/l Experimental result, Key study LC 50 (Danio rerio, 96 h): 10 - 18 mg/l Experimental result, Key study
Heptanoic acid, 2-propen-1-yl ester	LC 10 (Danio rerio, 24 h): > 0.0622 - < 0.219 mg/l Read-across from supporting substance (structural analogue or surrogate), Weight of Evidence study LC 0 (Pimephales promelas, 96 h): 0.058 mg/l Read-across from supporting substance (structural analogue or surrogate), Weight of Evidence study LC 20 (Danio rerio, 96 h): > 0.0622 - < 0.219 mg/l Read-across from supporting substance (structural analogue or surrogate), Weight of Evidence study LC 50 (Danio rerio, 72 h): 0.117 mg/l Read-across from supporting substance (structural analogue or surrogate), Weight of Evidence study LC 10 (Danio rerio, 72 h): > 0.0622 - < 0.219 mg/l Read-across from supporting substance (structural analogue or surrogate), Weight of Evidence study
2H-1-Benzopyran-2-one	LC 50 (Guppy (Poecilia reticulata), 96 h): 32 - 100 mg/l Mortality
Benzoic acid, 2-hydroxy-, hexyl ester	LC 50 (Danio rerio, 96 h): > 100 mg/l Experimental result, Supporting study



Acetic acid, phenylmethyl ester	LC 50 (Medaka, high-eyes (<i>Oryzias latipes</i>), 96 h): 3.48 - 4.6 mg/l Mortality LC 50 (<i>Oryzias latipes</i> , 96 h): 4 mg/l Other, Key study
Ethanol, 2,2',2''-nitrilotris-	LC 50 (<i>Pimephales promelas</i> , 96 h): 11,800 mg/l Experimental result, Key study
Ethanol, 2,2'-iminobis-	LC 50 (<i>Pimephales promelas</i> , 96 h): 1,370 mg/l Experimental result, Key study

Aquatic Invertebrates

Product:

No data available.

Specified substance(s):

2-Propanone	LC 50 (<i>Daphnia pulex</i> , 48 h): 8,800 mg/l Experimental result, Key study
Butane	LC 50 (<i>Daphnia</i> sp., 48 h): 69.43 mg/l QSAR QSAR, Key study
Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimethyl-, 2-acetate, (1R,2R,4R)-rel-	EC 50 (<i>Daphnia magna</i> , 48 h): 3.07 - 4.09 mg/l QSAR QSAR, Key study LC 50 (<i>Daphnia</i> sp., 48 h): 3.747 mg/l Estimated by calculation, Supporting study
Heptanoic acid, 2-propen-1-yl ester	EC 100 (<i>Daphnia magna</i> , 48 h): 1.25 mg/l Experimental result, Key study EC 100 (<i>Daphnia magna</i> , 48 h): 4 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study EC 50 (<i>Daphnia magna</i> , 48 h): 0.89 mg/l Experimental result, Key study EC 50 (<i>Daphnia magna</i> , 48 h): 3.8 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study EC 50 (<i>Daphnia magna</i> , 24 h): 7.7 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study
2H-1-Benzopyran-2-one	LC 50 (Water flea (<i>Daphnia magna</i>), 48 h): 10 - 18 mg/l Mortality
Benzoic acid, 2-hydroxy-, hexyl ester	NOAEL (<i>Daphnia magna</i> , 48 h): 0.14 mg/l Experimental result, Key study EC 50 (<i>Daphnia magna</i> , 48 h): 0.357 mg/l Experimental result, Key study
Acetic acid, phenylmethyl ester	EC 50 (<i>Daphnia magna</i> , 24 h): 25 mg/l Experimental result, Key study EC 50 (<i>Daphnia magna</i> , 48 h): 17 mg/l Experimental result, Key study NOAEL (<i>Daphnia magna</i> , 48 h): 10 mg/l Experimental result, Key study
Ethanol, 2,2',2''-nitrilotris-	EC 50 (<i>Ceriodaphnia dubia</i> , 48 h): 609.88 mg/l Experimental result, Key study
Ethanol, 2,2'-iminobis-	EC 50 (<i>Daphnia magna</i> , 48 h): 55 mg/l Experimental result, Supporting study EC 50 (<i>Ceriodaphnia dubia</i> , 48 h): 30.1 mg/l Experimental result, Key study

Chronic hazards to the aquatic environment:

Fish

Product:

No data available.

Specified substance(s):

2H-1-Benzopyran-2-one	NOAEL : 0.191 mg/l QSAR QSAR, Key study
Ethanol, 2,2'-iminobis-	NOAEL (Various): > 1 mg/l Estimated by calculation, Supporting study

Aquatic Invertebrates

Product:

No data available.



Specified substance(s): 2-Propanone	LOAEL (Daphnia magna): 2,212 mg/l Experimental result, Key study NOAEL (Daphnia magna): 2,212 mg/l Experimental result, Key study
2H-1-Benzopyran-2-one	NOAEL (Daphnia sp.): 0.5 mg/l QSAR QSAR, Key study
Ethanol, 2,2',2''-nitrilotris-	NOAEL (Daphnia magna): 16 mg/l Experimental result, Key study NOAEL (Daphnia magna): 125 mg/l Experimental result, Key study NOAEL (Daphnia magna): 250 mg/l Experimental result, Key study
Ethanol, 2,2'-iminobis-	NOAEL (Daphnia magna): 0.78 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): 2-Propanone	90.9 % (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
Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimethyl-, 2- acetate, (1R,2R,4R)-rel-	80 % Detected in water. Experimental result, Supporting study 71 % Detected in water. Experimental result, Key study 76 % Detected in water. Experimental result, Key study 61 % Detected in water. Experimental result, Key study 75 % Detected in water. Experimental result, Key study
Heptanoic acid, 2-propen- 1-yl ester	15 % Detected in water. Experimental result, Key study 40 % (28 d) Detected in water. Experimental result, Supporting study 81.6 % Detected in water. Experimental result, Supporting study 83 % Detected in water. Experimental result, Key study 78 % Detected in water. Experimental result, Key study
2H-1-Benzopyran-2-one	90 % Detected in water. Experimental result, Key study
Benzoic acid, 2-hydroxy-, hexyl ester	91 % Detected in water. Experimental result, Key study
Acetic acid, phenylmethyl ester	100 % (28 d) Detected in water. Experimental result, Key study
Ethanol, 2,2',2''-nitrilotris-	100 % (3 d) Sediment Experimental result, Key study
Ethanol, 2,2'-iminobis-	93 % (28 d) 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):	
2-Propanone	Haddock, adult, Bioconcentration Factor (BCF): 0.69 Aquatic sediment Experimental result, Not specified
Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimethyl-, 2- acetate, (1R,2R,4R)-rel-	Bioconcentration Factor (BCF): 319.3 Aquatic sediment Estimated by calculation, Key study
Heptanoic acid, 2-propen-1-yl ester	Various, Bioconcentration Factor (BCF): 473.2 Aquatic sediment QSAR, Key study Various, Bioconcentration Factor (BCF): 193.2 Aquatic sediment QSAR, Key study
2H-1-Benzopyran-2-one	Green algae (<i>Chlorella fusca vacuolata</i>), Bioconcentration Factor (BCF): 42 (Static)
Benzoic acid, 2-hydroxy-, hexyl ester	Bioconcentration Factor (BCF): 8,913 Aquatic sediment Estimated by calculation, Key study
Acetic acid, phenylmethyl ester	Bioconcentration Factor (BCF): 8 Aquatic sediment Estimated by calculation, Key study
Ethanol, 2,2',2''-nitrilotris-	Cyprinus carpio, Bioconcentration Factor (BCF): < 3.9 Aquatic sediment Experimental result, Key study
Ethanol, 2,2'-iminobis-	Bioconcentration Factor (BCF): 9.2 Aquatic sediment Estimated by calculation, Weight of Evidence study

Partition Coefficient n-octanol / water (log Kow)

Product:	No data available.
Specified substance(s):	
Ethanol, 2,2',2''-nitrilotris-	Log Kow: -1.75 - -1.32 No Estimated by calculation, Weight of Evidence study

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

2-Propanone	No data available.
Propane	No data available.
Butane	No data available.
Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimethyl-, 2-acetate, (1R,2R,4R)-rel-	No data available.
Proprietary	No data available.
Heptanoic acid, 2-propen-1-yl ester	No data available.
2H-1-Benzopyran-2-one	No data available.
Benzoic acid, 2-hydroxy-, hexyl ester	No data available.
Acetic acid, phenylmethyl ester	No data available.
Ethanol, 2,2',2''-nitrilotris-	No data available.
Ethanol, 2,2'-iminobis-	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)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
2-Propanone	lbs. 5000
Propane	lbs. 100
Butane	lbs. 100
Ethanol, 2,2'-iminobis-	lbs. 100

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

- Fire Hazard
- Immediate (Acute) Health Hazards
- Flammable aerosol
- Serious Eye Damage/Eye Irritation
- Specific Target Organ Toxicity - Single Exposure

SARA 302 Extremely Hazardous Substance

<u>Chemical Identity</u>	<u>Reportable quantity</u>	<u>Threshold Planning Quantity</u>
2-Propanone		

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
2-Propanone	lbs. 5000
Propane	lbs. 100
Butane	lbs. 100
Ethanol, 2,2'-iminobis-	lbs. 100

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
2-Propanone	10000 lbs
Propane	10000 lbs
Butane	10000 lbs
Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimethyl-, 2-acetate, (1R,2R,4R)-rel-	10000 lbs
Proprietary	10000 lbs
Heptanoic acid, 2-propen- 1-yl ester	10000 lbs
2H-1-Benzopyran-2-one	10000 lbs
Benzoic acid, 2-hydroxy-, hexyl ester	10000 lbs
Acetic acid, phenylmethyl ester	10000 lbs
Ethanol, 2,2',2''-nitrotris-	10000 lbs
Ethanol, 2,2'-iminobis-	10000 lbs

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

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

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

Chemical Identity

2-Propanone
Propane
Butane

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

2-Propanone
Propane
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:	Not 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:	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:	Not 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:	Not in compliance with the inventory.

16. Other information, including date of preparation or last revision

Issue Date:	07/09/2019
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.