



SAFETY DATA SHEET

1. Identification

Product identifier: CLEAN BREEZE HEAVY DUTY ODOR NEUTRALIZER

Other means of identification

SDS number: RE1000011815

Recommended restrictions

Product use: Air Freshener

Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name: CLAIRE MANUFACTURING COMPANY
Address: 1000 Integram Dr
Pacific, MO 63069
Telephone: 1-630-543-7600
Fax:

Emergency telephone number: 1-866-836-8855

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable aerosol Category 1

Health Hazards

Skin sensitizer Category 1

Aspiration Hazard Category 1

Environmental Hazards

Acute hazards to the aquatic environment Category 3

Chronic hazards to the aquatic environment Category 3

Label Elements

Hazard Symbol:



Signal Word: Danger



Hazard Statement:	Extremely flammable aerosol. May cause an allergic skin reaction. May be fatal if swallowed and enters airways. Harmful to aquatic life with long lasting effects.
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. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.
Response:	IF ON SKIN: Wash with plenty of water/# If skin irritation or rash occurs: Get medical advice/attention. IF SWALLOWED: Immediately call a POISON CENTER/doctor/# Do NOT induce vomiting. Specific treatment (see on this label). Wash contaminated clothing before reuse.
Storage:	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. 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 (%)*
Distillates (petroleum), hydrotreated light	64742-47-8	10 - <20%
Propane	74-98-6	5 - <10%
Butane	106-97-8	1 - <5%
Ethanone, 1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)-	54464-57-2	0.1 - <1%
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-	5989-27-5	0.1 - <1%
Octanal, 2-(phenylmethylene)-	101-86-0	0.1 - <1%
Benzoic acid, 2-hydroxy-, phenylmethyl ester	118-58-1	0.1 - <1%
Benzene, 1,1'-oxybis-	101-84-8	0.1 - <1%
2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-	106-24-1	0.1 - <1%
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-	127-91-3	0.1 - <0.25%

* 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 physician or poison control center immediately. Rinse mouth. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Inhalation:	Move to fresh air.
Skin Contact:	If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical 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.
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Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Use fire-extinguishing media appropriate for surrounding materials.
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Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.
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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.
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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.
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6. Accidental release measures



**Personal precautions,
protective equipment and
emergency procedures:**

Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

**Methods and material for
containment and cleaning
up:**

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.

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. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling.

**Conditions for safe storage,
including any
incompatibilities:**

Store locked up. 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
Distillates (petroleum), hydrotreated light - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	US. ACGIH Threshold Limit Values (2008)
Distillates (petroleum), hydrotreated light	REL	100 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Distillates (petroleum), hydrotreated light - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	US. ACGIH Threshold Limit Values (2008)
Distillates (petroleum), hydrotreated light	ST ESL	3,500 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	350 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Propane	REL	1,000 ppm 1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA PEL	1,000 ppm 1,800 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	TWA	1,000 ppm 1,800 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	TWA	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
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)
Benzene, 1,1'-oxybis- - Vapor.	STEL	2 ppm	US. ACGIH Threshold Limit Values (03 2018)
	TWA	1 ppm	US. ACGIH Threshold Limit Values (03 2018)
	PEL	1 ppm 7 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA PEL	1 ppm 7 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	REL	1 ppm 7 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	1 ppm 7 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Benzene, 1,1'-oxybis-	ST ESL	70 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	7 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Benzene, 1,1'-oxybis- - Vapor.	TWA	1 ppm 7 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
Benzene, 1,1'-oxybis-	ST ESL	10 ppb	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)
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-	AN ESL	63 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	350 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	3,500 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	630 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA	20 ppm	US. ACGIH Threshold Limit Values (2008)
Ammonium hydroxide ((NH4)(OH))	AN ESL	92 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	180 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	STEL	35 ppm	US. ACGIH Threshold Limit Values (2008)
	TWA	25 ppm	US. ACGIH Threshold Limit Values (2008)
	TWA PEL	25 ppm 18 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)



	STEL	35 ppm	27 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	STEL	35 ppm	27 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	35 ppm	27 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	REL	25 ppm	18 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	50 ppm	35 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

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.

Eyeface protection:

Wear goggles/face shield.

Skin Protection

Hand Protection:

No data available.

Other:

Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Respiratory Protection:

In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures:

When using do not smoke. Observe good industrial hygiene practices. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

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:	6,205.2815 - 6,894.7572 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: Not classified for acute toxicity based on available data.

Specified substance(s):

Distillates (petroleum),
hydrotreated light LD 50 (Rat): > 5,000 mg/kg

Ethanone, 1-
(1,2,3,4,5,6,7,8-
octahydro-2,3,8,8-
tetramethyl-2-
naphthalenyl)- LD 50: > 2,000 mg/kg

Cyclohexene, 1-methyl-4-
(1-methylethenyl)-, (4R)- LD 50 (Rat): > 2,000 mg/kg

Octanal, 2-
(phenylmethylene)- LD 50: > 2,000 mg/kg

Benzoic acid, 2-hydroxy-,
phenylmethyl ester LD 50 (Rat): 3,031 mg/kg

Benzene, 1,1'-oxybis- LD 50 (Rat): 2.83 g/kg

2,6-Octadien-1-ol, 3,7-
dimethyl-, (2E)- LD 50 (Rat): 3,600 mg/kg

Bicyclo[3.1.1]heptane,
6,6-dimethyl-2-
methylene- LD 50 (Rat): 3,700 mg/kg

Dermal

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

Specified substance(s):

Distillates (petroleum),
hydrotreated light LD 50 (Rabbit): > 2,000 mg/kg

Ethanone, 1-
(1,2,3,4,5,6,7,8-
octahydro-2,3,8,8-
tetramethyl-2-
naphthalenyl)- LD 50: > 2,000 mg/kg

Cyclohexene, 1-methyl-4-
(1-methylethenyl)-, (4R)- LD 50 (Rabbit): > 5,000 mg/kg

Octanal, 2-
(phenylmethylene)- LD 50: > 2,000 mg/kg

Benzoic acid, 2-hydroxy-,
phenylmethyl ester LD 50 (Rabbit): > 2,000 mg/kg

Benzene, 1,1'-oxybis- LD 50 (Rabbit): > 7,940 mg/kg

2,6-Octadien-1-ol, 3,7-
dimethyl-, (2E)- LD 50 (Rabbit): > 5,000 mg/kg

Bicyclo[3.1.1]heptane, LD 50 (Rabbit): > 5,000 mg/kg



6,6-dimethyl-2-methylene-

Inhalation

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

Specified substance(s):

Distillates (petroleum), hydrotreated light	LC 50: > 5 mg/l LC 50: > 20 mg/l
Propane	LC 50 (Mouse): 1,237 mg/l
Butane	LC 50 (Mouse): 1,237 mg/l
Ethanone, 1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)-	LC 50: > 5 mg/l LC 50: > 20 mg/l
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-	LC 50: > 20 mg/l LC 50: > 5 mg/l
Octanal, 2-(phenylmethylene)-	LC 50: > 20 mg/l
Benzene, 1,1'-oxybis-	LC 50: > 20 mg/l
2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-	LC 50: > 20 mg/l LC 50: > 5 mg/l

Repeated dose toxicity

Product: No data available.

Specified substance(s):

Distillates (petroleum), hydrotreated light	NOAEL (Rat(Female, Male), Inhalation): >= 24 mg/m3 Inhalation Experimental result, Key study NOAEL (Rat(Female), Oral, 70 - 147 d): 750 mg/kg 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
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-	NOAEL (Rat(Male), Oral, 13 Weeks): 600 mg/kg Oral Experimental result, Key study
Benzoic acid, 2-hydroxy-, phenylmethyl ester	NOAEL (Rat(Female), Oral, 102 - 131 d): 360 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Key study
Benzene, 1,1'-oxybis-	NOAEL (Rat(Female, Male), Dermal, 13 Weeks): 100 mg/kg Dermal Experimental result, Key study NOAEL (Rat(Male), Oral, 13 Weeks): 301 mg/kg Oral Experimental result, Key study
2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-	NOAEL (Rat(Female, Male), Oral, 112 - 196 d): > 550 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female, Male), Dermal): 300 mg/kg Dermal Experimental result, Key study



Bicyclo[3.1.1]heptane, 6,6-dimethyl-2- methylene-	result, Key study LOAEL (Rat(Male), Inhalation, 14 Weeks): 25 ppm(m) Inhalation Read-across from supporting substance (structural analogue or surrogate), Key study NOAEL (Rat(Female), Inhalation, 14 Weeks): 200 ppm(m) Inhalation Read-across from supporting substance (structural analogue or surrogate), Key study
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Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

Distillates (petroleum), hydrotreated light	in vivo (Rabbit): Not irritant Experimental result, Key study
Cyclohexene, 1-methyl- 4-(1-methylethenyl)-, (4R)-	in vivo (Rabbit): Not irritant Experimental result, Key study
Benzoic acid, 2- hydroxy-, phenylmethyl ester	in vivo (Rabbit): Not irritant Experimental result, Weight of Evidence study
Benzene, 1,1'-oxybis-	in vivo (Rabbit): Not irritant Experimental result, Key study
2,6-Octadien-1-ol, 3,7- dimethyl-, (2E)-	in vivo (Rabbit): Irritating Experimental result, Key study
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2- methylene-	In vitro (Human): Irritating Experimental result, Key study

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

Distillates (petroleum), hydrotreated light	Rabbit, 24 - 72 hrs: Not irritating
Cyclohexene, 1-methyl- 4-(1-methylethenyl)-, (4R)-	Rabbit, 24 - 72 hrs: Not irritating
Benzene, 1,1'-oxybis-	Rabbit, 48 - 72 hrs: Irritating.
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2- methylene-	Rabbit, 24 - 72 hrs: Not irritating

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

Distillates (petroleum), hydrotreated light	Skin sensitization:, in vivo (Guinea pig): Non sensitising
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Benzene, 1,1'-oxybis-	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Bicyclo[3.1.1]heptane,	Skin sensitization:, in vivo (Human): Non sensitising
6,6-dimethyl-2-methylene-	Skin sensitization:, in vivo (Guinea pig): Sensitising

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Specified substance(s):

Distillates (petroleum), hydrotreated light	May be fatal if swallowed and enters airways.
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Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Distillates (petroleum),	LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 2.9
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hydrotreated light	mg/l Mortality NOAEL (Oncorhynchus mykiss, 96 h): 2 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
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-	EC 50 (Pimephales promelas, 96 h): 688 µg/l Experimental result, Key study
Octanal, 2-(phenylmethylene)-	LC 50 (96 h): < 1 mg/l Review
Benzoic acid, 2-hydroxy-, phenylmethyl ester	LC 50 (Danio rerio, 96 h): 1.03 mg/l Experimental result, Key study
Benzene, 1,1'-oxybis-	LC 50 (Oncorhynchus mykiss, 96 h): 4.2 mg/l Experimental result, Key study
2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-	LC 0 (Danio rerio, 96 h): 10 mg/l Experimental result, Key study LC 50 (Danio rerio, 96 h): +/- 22 mg/l Experimental result, Key study
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-	LC 50 (Pimephales promelas, 96 h): 502 µg/l Experimental result, Supporting study

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Distillates (petroleum), hydrotreated light	EC 50 (Daphnia magna, 24 h): 4.6 mg/l Experimental result, Key study NOAEL (Daphnia magna, 48 h): 0.3 mg/l Experimental result, Key study EC 50 (Daphnia magna, 48 h): 1.4 mg/l Experimental result, Key study
Butane	LC 50 (Daphnia sp., 48 h): 69.43 mg/l QSAR QSAR, Key study
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-	EC 50 (Daphnia magna, 48 h): 0.36 mg/l Experimental result, Key study NOAEL (Daphnia magna, 48 h): 0.074 mg/l Experimental result, Key study
Benzoic acid, 2-hydroxy-, phenylmethyl ester	EC 50 (Daphnia magna, 48 h): 1.16 mg/l Experimental result, Key study NOAEL (Daphnia magna, 48 h): 0.894 mg/l Experimental result, Key study
Benzene, 1,1'-oxybis-	LC 50 (Daphnia magna, 48 h): 1.7 mg/l Experimental result, Key study NOAEL (Daphnia magna, 48 h): 1 mg/l Experimental result, Key study
2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-	EC 50 (Daphnia magna, 48 h): 10.8 mg/l Experimental result, Key study
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-	EC 50 (Daphnia magna, 48 h): 1,250 µg/l Experimental result, Supporting study

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Distillates (petroleum), hydrotreated light	NOAEL (Oncorhynchus mykiss): 0.098 mg/l QSAR QSAR, Key study
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Octanal, 2-(phenylmethylene)-

NOEC (21 d): < 10 mg/l Review

Aquatic Invertebrates

Product:

No data available.

Specified substance(s):

Distillates (petroleum), hydrotreated light

NOAEL (Daphnia magna): 1.2 mg/l Experimental result, Key study
EC 50 (Daphnia magna): 0.81 mg/l Experimental result, Key study

Ethanone, 1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)-

EC 50 : < 10 mg/l estimation

Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-

NOAEL (Freshwater invertebrates, species frequently include Daphnia magna or Daphnia pulex): 0.115 mg/l QSAR QSAR, Weight of Evidence study

Toxicity to Aquatic Plants

Product:

No data available.

Persistence and Degradability

Biodegradation

Product:

No data available.

Specified substance(s):

Distillates (petroleum), hydrotreated light

61 % Detected in water. Experimental result, Supporting 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

Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-

80 % (28 d) Detected in water. Read-across from supporting substance (structural analogue or surrogate), Key study

Benzoic acid, 2-hydroxy-, phenylmethyl ester

93 % (28 d) Detected in water. Experimental result, Key study

Benzene, 1,1'-oxybis-

76 % Detected in water. Experimental result, Key study

2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-

90 - 100 % (3 d) Detected in water. Experimental result, Key study
94 % (28 d) Detected in water. Experimental result, Supporting study

Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-

76 % (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):

Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-	Bioconcentration Factor (BCF): 864.8 Aquatic sediment QSAR, Key study
Benzoic acid, 2-hydroxy-, phenylmethyl ester	Bioconcentration Factor (BCF): 311 Aquatic sediment QSAR, Supporting study
Benzene, 1,1'-oxybis-	Oncorhynchus mykiss, Bioconcentration Factor (BCF): 200 Aquatic sediment Experimental result, Key study
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-	Bioconcentration Factor (BCF): 1,163 Aquatic sediment QSAR, Key study

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-	Log Kow: 4.34 - 4.46 25 °C No Experimental result, Supporting study
2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-	Log Kow: 2.6 25 °C

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Distillates (petroleum), hydrotreated light	No data available.
Propane	No data available.
Butane	No data available.
Ethanone, 1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)-	No data available.
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-	No data available.
Octanal, 2-(phenylmethylene)-	No data available.
Benzoic acid, 2-hydroxy-, phenylmethyl ester	No data available.
Benzene, 1,1'-oxybis-	No data available.
2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-	No data available.
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-	No data available.

Other adverse effects: Harmful to aquatic life with long lasting effects.

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

Restrictions on use: Not known.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):



<u>Chemical Identity</u>	<u>Reportable quantity</u>
Propane	lbs. 100
Butane	lbs. 100
Ammonium hydroxide ((NH ₄)(OH))	lbs. 1000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Fire Hazard
Immediate (Acute) Health Hazards
Flammable aerosol
Skin sensitizer
Aspiration Hazard

SARA 302 Extremely Hazardous Substance

<u>Chemical Identity</u>	<u>Reportable quantity</u>	<u>Threshold Planning Quantity</u>
Distillates (petroleum), hydrotreated light		

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Distillates (petroleum), hydrotreated light	
Propane	lbs. 100
Butane	lbs. 100
Ammonium hydroxide ((NH ₄)(OH))	lbs. 1000

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Distillates (petroleum), hydrotreated light	10000 lbs
Propane	10000 lbs
Butane	10000 lbs
Ethanone, 1- (1,2,3,4,5,6,7,8-octahydro- 2,3,8,8-tetramethyl-2- naphthalenyl)-	10000 lbs
Cyclohexene, 1-methyl-4- (1-methylethenyl)-, (4R)-	10000 lbs
Octanal, 2- (phenylmethylene)-	10000 lbs
Benzoic acid, 2-hydroxy-, phenylmethyl ester	10000 lbs
Benzene, 1,1'-oxybis- 2,6-Octadien-1-ol, 3,7- dimethyl-, (2E)-	10000 lbs
Bicyclo[3.1.1]heptane, 6,6- dimethyl-2-methylene-	10000 lbs
Ammonium hydroxide ((NH ₄)(OH))	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):

SDS_US - RE1000011815



**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.

1,6-Octadiene, 7-methyl-3- Carcinogenic. 03 2015
methylene-

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

Chemical Identity

Distillates (petroleum), hydrotreated light
Propane
Butane

US. Massachusetts RTK - Substance List

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

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Distillates (petroleum), hydrotreated light
Propane
Butane

US. Rhode Island RTK

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

International regulations

Montreal protocol

Distillates (petroleum),
hydrotreated light

Stockholm convention

Distillates (petroleum),
hydrotreated light

Rotterdam convention

Distillates (petroleum),
hydrotreated light

Kyoto protocol

**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
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: 08/15/2019

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.