



# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** TERAND VANILLA METERED AIR FRESHENER

**Other means of identification**

**SDS number:** RE1000001350

**Recommended restrictions**

**Product use:** Air Freshener

**Restrictions on use:** Not known.

**Manufacturer/Importer/Distributor Information**

**Manufacturer**

Company Name: CPC  
Address: 1000 INTEGRAM DRIVE  
PACIFIC, MO 63069  
Telephone: 1-800-327-1835  
Fax:

**Emergency telephone number:** 1-866-836-8855

## 2. Hazard(s) identification

**Hazard Classification**

**Physical Hazards**

Flammable aerosol Category 1

**Health Hazards**

Serious Eye Damage/Eye Irritation Category 2A

Specific Target Organ Toxicity -  
Single Exposure Category 3<sup>1</sup>

**Target Organs**

1. Narcotic effect.

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger



<b>Hazard Statement:</b>	Extremely flammable aerosol. Causes serious eye irritation. May cause drowsiness or dizziness.
<b>Precautionary Statements</b>	
<b>Prevention:</b>	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.
<b>Response:</b>	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.
<b>Storage:</b>	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.
<b>Disposal:</b>	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.
<b>Hazard(s) not otherwise classified (HNOC):</b>	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%
2H-1-Benzopyran-2-one	91-64-5	0.1 - <1%
1,3-Benzodioxole-5-carboxaldehyde	120-57-0	0.1 - <1%
Ethanol	64-17-5	0.1 - <1%
Ethanol, 2,2',2''-nitrilotris-	102-71-6	0 - <0.1%
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	84-66-2	0 - <0.1%
2,3-Butanedione	431-03-8	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



<b>Ingestion:</b>	Rinse mouth thoroughly.
<b>Inhalation:</b>	Move to fresh air.
<b>Skin Contact:</b>	Remove contaminated clothing and wash the skin thoroughly with soap and water after work.
<b>Eye contact:</b>	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**

<b>Symptoms:</b>	No data available.
<b>Hazards:</b>	No data available.

**Indication of immediate medical attention and special treatment needed**

<b>Treatment:</b>	No data available.
-------------------	--------------------

**5. Fire-fighting measures**

<b>General Fire Hazards:</b>	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**

<b>Suitable extinguishing media:</b>	Use fire-extinguishing media appropriate for surrounding materials. Use fire-extinguishing media appropriate for surrounding materials.
--------------------------------------	---

<b>Unsuitable extinguishing media:</b>	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.
--	---

<b>Specific hazards arising from the chemical:</b>	Vapors may travel considerable distance to a source of ignition and flash back.
--	---

**Special protective equipment and precautions for firefighters**

<b>Special fire fighting procedures:</b>	No data available.
--	--------------------

<b>Special protective equipment for fire-fighters:</b>	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**

<b>Personal precautions, protective equipment and emergency procedures:</b>	Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.
---	---

<b>Methods and material for containment and cleaning up:</b>	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:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

**7. Handling and storage**

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

**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)
Ethanol	TWA PEL	1,000 ppm 1,900 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	REL	1,000 ppm 1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	1,000 ppm 1,900 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	1,000 ppm 1,900 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	1,000 ppm 1,900 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	1,000 ppm	US. ACGIH Threshold Limit Values (2009)
	AN ESL	1,880 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	10,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	1,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	18,800 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Ethanol, 2,2',2''-nitrilotris-	TWA PEL	5 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	ST ESL	50 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (2008)
	AN ESL	5 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	REL	5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (2008)
	TWA PEL	5 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)
	TWA	5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	5 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL	50 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	5 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
2,3-Butanedione	STEL	0.02 ppm	US. ACGIH Threshold Limit Values (02 2012)
	TWA	0.01 ppm	US. ACGIH Threshold Limit Values (02 2012)
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.



<b>Melting point/freezing point:</b>	No data available.
<b>Initial boiling point and boiling range:</b>	No data available.
<b>Flash Point:</b>	-104.44 °C
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	3,102.6408 - 4,481.5922 hPa (20 °C)
<b>Vapor density:</b>	No data available.
<b>Density:</b>	No data available.
<b>Relative density:</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	No data available.
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

## 10. Stability and reactivity

<b>Reactivity:</b>	No data available.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	No data available.
<b>Conditions to avoid:</b>	Avoid heat or contamination.
<b>Incompatible Materials:</b>	No data available.
<b>Hazardous Decomposition Products:</b>	No data available.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.
<b>Ingestion:</b>	No data available.



### Symptoms related to the physical, chemical and toxicological characteristics

<b>Inhalation:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.
<b>Ingestion:</b>	No data available.

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

##### Oral

**Product:** ATEmix: 89,890.69 mg/kg

##### Dermal

**Product:** ATEmix: 89,234.72 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
2H-1-Benzopyran-2-one	LC 50: > 5 mg/l LC 50: > 20 mg/l
1,3-Benzodioxole-5-carboxaldehyde	LC 50: > 5 mg/l LC 50: > 20 mg/l
Ethanol	LC 50 (Rat): 124.7 mg/l
Ethanol, 2,2',2''-nitrotris-	LC 0 (Rat): 1.8 mg/m <sup>3</sup> LC 50: > 5 mg/l
2,3-Butanedione	LC 50: < 1 mg/l LC 50: < 10 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
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
1,3-Benzodioxole-5-carboxaldehyde	NOAEL (Rat(Female, Male), Oral, 12 Weeks): 17 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Supporting study
Ethanol	NOAEL (Rat(Male), Oral, 7 - 14 Weeks): 10 %(m) Oral Experimental result, Key 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
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	NOAEL (Rat(Female, Male), Oral, 6 - 16 Weeks): 150 mg/kg Oral Experimental result, Key study
2,3-Butanedione	LOAEL (Rat, Inhalation - vapor): 1 mg/l (Target Organ(s): Lungs)
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/m3 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
2H-1-Benzopyran-2-one	in vivo (Rabbit): Not irritant Experimental result, Key study
1,3-Benzodioxole-5-carboxaldehyde	in vivo (Guinea pig): Not irritant Experimental result, Weight of Evidence study
Ethanol	in vivo (Rabbit): Not irritant Experimental result, Key study
Ethanol, 2,2',2''-nitrilotris-	in vivo (Rabbit): Not irritant Experimental result, Key study
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	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
Ethanol	Rabbit, 1 - 24 hrs: Not irritating

#### **Respiratory or Skin Sensitization**

**Product:** No data available.

**Specified substance(s):**

2-Propanone	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Ethanol	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Ethanol, 2,2',2''-nitrilotris-	Skin sensitization:, in vivo (Guinea pig): Non sensitising
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	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.

**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
2H-1-Benzopyran-2-one	LC 50 (Guppy (Poecilia reticulata), 96 h): 32 - 100 mg/l Mortality
1,3-Benzodioxole-5-	LC 50 (Cyprinus carpio, 96 h): 2.5 mg/l Experimental result, Key study



carboxaldehyde	NOAEL (Cyprinus carpio, 96 h): 1.6 mg/l Experimental result, Key study
Ethanol	LC 50 (Pimephales promelas, 96 h): 15.3 g/l Experimental result, Key study
Ethanol, 2,2',2''-nitrilotris-	LC 50 (Pimephales promelas, 96 h): 11,800 mg/l Experimental result, Key study
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	NOAEL (Oncorhynchus mykiss, 96 h): 1.9 mg/l Experimental result, Key study LC 50 (Oncorhynchus mykiss, 96 h): 12 mg/l Experimental result, Key study
Ethanol, 2,2'-iminobis-	LC 50 (Pimephales promelas, 96 h): 1,370 mg/l Experimental result, Key study

#### Aquatic Invertebrates

**Product:** No data available.

**Specified substance(s):**

2-Propanone	LC 50 (Daphnia pulex, 48 h): 8,800 mg/l Experimental result, Key study
Butane	LC 50 (Daphnia sp., 48 h): 69.43 mg/l QSAR QSAR, Key study
2H-1-Benzopyran-2-one	LC 50 (Water flea (Daphnia magna), 48 h): 10 - 18 mg/l Mortality
1,3-Benzodioxole-5-carboxaldehyde	EC 50 (Daphnia magna, 48 h): 52 mg/l Experimental result, Key study NOAEL (Daphnia magna, 48 h): 22 mg/l Experimental result, Key study
Ethanol	LC 50 (Ceriodaphnia dubia, 48 h): 5,012 mg/l Experimental result, Key study
Ethanol, 2,2',2''-nitrilotris-	EC 50 (Ceriodaphnia dubia, 48 h): 609.88 mg/l Experimental result, Key study
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	NOAEL (Daphnia magna, 48 h): 43 mg/l Experimental result, Key study LC 50 (Daphnia magna, 48 h): 90 mg/l Experimental result, Key study
Ethanol, 2,2'-iminobis-	EC 50 (Daphnia magna, 48 h): 55 mg/l Experimental result, Supporting study EC 50 (Ceriodaphnia dubia, 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	NOAEL (Oryzias latipes): 7,900 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting 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	LC 50 (Daphnia magna): 454 mg/l Experimental result, Key study NOAEL (Daphnia magna): 9.6 mg/l Experimental result, 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
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	NOAEL (Daphnia magna): 25 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
2H-1-Benzopyran-2-one	90 % Detected in water. Experimental result, Key study
1,3-Benzodioxole-5-carboxaldehyde	82 % Detected in water. Experimental result, Key study
Ethanol	95 % Detected in water. Experimental result, Key study
Ethanol, 2,2',2''-nitrilotris-	100 % (3 d) Sediment Experimental result, Key study
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	94.6 % (28 d) Detected in water. 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
2H-1-Benzopyran-2-one	Green algae (Chlorella fusca vacuolata), Bioconcentration Factor (BCF): 42 (Static)
Ethanol	Cyprinus carpio, Bioconcentration Factor (BCF): 4.5 Aquatic sediment Read- across from supporting substance (structural analogue or surrogate), Supporting study
Ethanol, 2,2',2''-nitrilotris-	Cyprinus carpio, Bioconcentration Factor (BCF): < 3.9 Aquatic sediment Experimental result, Key study
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	Bluegill (Lepomis macrochirus), Bioconcentration Factor (BCF): 117 (Flow through)
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.
2H-1-Benzopyran-2-one	No data available.
1,3-Benzodioxole-5- carboxaldehyde	No data available.
Ethanol	No data available.
Ethanol, 2,2',2''-nitrilotris-	No data available.
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	No data available.
2,3-Butanedione	No data available.
Ethanol, 2,2'-iminobis-	No data available.

**Other adverse effects:** No data available.

**13. Disposal considerations**

**Disposal instructions:** Wash before disposal. Dispose to controlled facilities.

**Contaminated Packaging:** No data available.



## 14. Transport information

### DOT

UN Number:	UN 1950
UN Proper Shipping Name:	Aerosols, flammable
Transport Hazard Class(es)	
Class:	2.1
Label(s):	–
Packing Group:	II
Marine Pollutant:	No
Environmental Hazards:	No
Marine Pollutant	No
Special precautions for user:	Not regulated.

### IMDG

UN Number:	UN 1950
UN Proper Shipping Name:	Aerosols, flammable
Transport Hazard Class(es)	
Class:	2
Label(s):	–
EmS No.:	
Packing Group:	–
Environmental Hazards:	No
Marine Pollutant	No
Special precautions for user:	Not regulated.

### IATA

UN Number:	UN 1950
Proper Shipping Name:	Aerosols, flammable
Transport Hazard Class(es):	
Class:	2.1
Label(s):	–
Packing Group:	–
Environmental Hazards:	No
Marine Pollutant	No
Special precautions for user:	Not regulated.

## 15. Regulatory information

### US Federal Regulations

**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	lbs. 100
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	lbs. 1000
2,3-Butanedione	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	lbs. 100
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	lbs. 1000
2,3-Butanedione	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
2H-1-Benzopyran-2-one	10000 lbs
1,3-Benzodioxole-5-carboxaldehyde	10000 lbs
Ethanol	10000 lbs
Ethanol, 2,2',2''-nitrilotris-	10000 lbs
1,2-Benzenedicarboxylic acid, 1,2-diethyl ester	10000 lbs
2,3-Butanedione	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

Ethanol

**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:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	Not in compliance with the inventory.
Japan (ENCS) List:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	Not in compliance with the inventory.
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	Not in compliance with the inventory.
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	Not in compliance with the inventory.
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.
Mexico INSQ:	Not in compliance with the inventory.
Ontario Inventory:	Not in compliance with the inventory.
Taiwan Chemical Substance Inventory:	Not in compliance with the inventory.

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

**Issue Date:** 07/12/2019

**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.