

# SAFETY DATA SHEET

SUNOCO Denatured Ethanol E98



## Section 1. Identification

**GHS product identifier** : SUNOCO Denatured Ethanol E98

**Other means of identification** : Not available.

**Product code** : 084800

**Product use** : Alcohol (Purchased)  
Denatured Ethanol-Unfit For Human Consumption

**Supplier's details** : Sunoco LP  
3801 West Chester Pike  
Newtown Square, Pennsylvania 19073  
Sunoco Race Fuels email: performanceproducts@sunoco.com  
http://www.sunocoracefuels.com

**e-mail address of person responsible for this SDS** : sunocomsds@sunoco.com

**Emergency telephone number (with hours of operation)** : Sunoco LP: (800) 964-8861  
Chemtrec: 1-800-424-9300 (Available 24 hours/7 days per week)  
Product Safety Information: 1-888-567-3066

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 2  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
GERM CELL MUTAGENICITY - Category 1  
CARCINOGENICITY - Category 1A  
ASPIRATION HAZARD - Category 1

### GHS label elements

**Hazard pictograms** :



**Signal word** :

**Hazard statements** :

Danger

Highly flammable liquid and vapor.  
Causes serious eye irritation.  
Causes skin irritation.  
May cause genetic defects.  
May cause cancer.  
May be fatal if swallowed and enters airways.

### Precautionary statements

## Section 2. Hazards identification

<b>Prevention</b>	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Wash hands thoroughly after handling.
<b>Response</b>	: IF exposed or concerned: Get medical attention. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. 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 attention.
<b>Storage</b>	: Store locked up. Store in a well-ventilated place. Keep cool.
<b>Disposal</b>	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazards not otherwise classified</b>	: Static-accumulating flammable liquid Vapors may form explosive mixture with air Product contains methanol: Poison, may be fatal or cause blindness if swallowed. Cannot be made non-poisonous.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: Mixture
<b>Other means of identification</b>	: Not available.
<b>Product code</b>	: 084800

Ingredient name	%	CAS number
ethanol	93 - 97	64-17-5
light petroleum distillate	1.96 - 2.49	8006-61-9
water	0.5 - 1.0	7732-18-5
methanol	0.04 - 0.5	67-56-1
benzene	0 - 0.2	71-43-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Get medical attention.
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## Section 4. First aid measures

- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with soap and water for 20 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.  
Injection injuries may not appear serious at first but within a few hours, without proper treatment, the area will become swollen, discolored and extremely painful. Following injection, prompt debridement of the wound is necessary to minimize necrosis and tissue loss.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. Loss of coordination. Headache. Fatigue.
- Skin contact** : Causes skin irritation.
- Ingestion** : May be fatal if swallowed and enters airways.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  
  
Catecholamines and similar adrenergic drugs are generally contraindicated because of potential for increased sensitivity of the heart from hydrocarbon overexposure and subsequent ventricular fibrillation. EKG monitoring may be indicated and bronchodilators should be selected with care.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

## Section 4. First aid measures

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub> or foam. Use an extinguishing agent suitable for the surrounding fire. Use water spray to keep fire-exposed containers cool.
- Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : HIGHLY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. Vapors may form explosive mixtures with air. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
asphyxiants

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

#### Protective measures

: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

#### Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

#### Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.  
NFPA Class 1B storage.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
ethanol	<p><b>ACGIH TLV (United States, 3/2017).</b> STEL: 1000 ppm 15 minutes.</p> <p><b>NIOSH REL (United States, 10/2016).</b> TWA: 1000 ppm 10 hours. TWA: 1900 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b> TWA: 1000 ppm 8 hours. TWA: 1900 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1000 ppm 8 hours. TWA: 1900 mg/m<sup>3</sup> 8 hours.</p>
light petroleum distillate	<p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 300 ppm 8 hours. TWA: 900 mg/m<sup>3</sup> 8 hours. STEL: 500 ppm 15 minutes. STEL: 1500 mg/m<sup>3</sup> 15 minutes.</p>
water	None.
methanol	<p><b>ACGIH TLV (United States, 3/2017).</b> <b>Absorbed through skin.</b> TWA: 200 ppm 8 hours. TWA: 262 mg/m<sup>3</sup> 8 hours. STEL: 250 ppm 15 minutes. STEL: 328 mg/m<sup>3</sup> 15 minutes.</p> <p><b>NIOSH REL (United States, 10/2016).</b></p>

## Section 8. Exposure controls/personal protection

benzene

**Absorbed through skin.**

TWA: 200 ppm 10 hours.  
 TWA: 260 mg/m<sup>3</sup> 10 hours.  
 STEL: 250 ppm 15 minutes.  
 STEL: 325 mg/m<sup>3</sup> 15 minutes.

**OSHA PEL (United States, 6/2016).**

TWA: 200 ppm 8 hours.  
 TWA: 260 mg/m<sup>3</sup> 8 hours.

**OSHA PEL 1989 (United States, 3/1989).****Absorbed through skin.**

TWA: 200 ppm 8 hours.  
 TWA: 260 mg/m<sup>3</sup> 8 hours.  
 STEL: 250 ppm 15 minutes.  
 STEL: 325 mg/m<sup>3</sup> 15 minutes.

**ACGIH TLV (United States, 3/2017).****Absorbed through skin.**

TWA: 0.5 ppm 8 hours.  
 TWA: 1.6 mg/m<sup>3</sup> 8 hours.  
 STEL: 2.5 ppm 15 minutes.  
 STEL: 8 mg/m<sup>3</sup> 15 minutes.

**OSHA PEL Z2 (United States, 2/2013).**

TWA: 10 ppm 8 hours.  
 CEIL: 25 ppm  
 AMP: 50 ppm 10 minutes.

**NIOSH REL (United States, 10/2016).**

TWA: 0.1 ppm 10 hours.  
 STEL: 1 ppm 15 minutes.

**OSHA PEL (United States, 6/2016).**

TWA: 1 ppm 8 hours.  
 STEL: 5 ppm 15 minutes.

**OSHA PEL 1989 (United States, 3/1989).**

TWA: 1 ppm 8 hours.  
 STEL: 5 ppm 15 minutes.

**Appropriate engineering controls**

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls**

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures****Hygiene measures**

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

**Skin protection**

## Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Recommended: > 8 hours (breakthrough time): nitrile rubber, Viton®, Teflon
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Recommended: nitrile rubber, Viton®, Teflon
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Ensure an MSHA/NIOSH-approved respirator or equivalent is used.
- Half-mask air purifying respirator with organic vapor cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with organic vapor cartridges is acceptable for exposures to fifty (50) times the exposure limit. Exposure should not exceed the cartridge limit of 1000 ppm. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Clear.
- Odor** : Alcohol-like.
- Odor threshold** : 100 ppm
- pH** : 7 to 9
- Melting point** : Not available.
- Boiling point** : 73.9 to 79.4°C (165 to 174.9°F)
- Flash point** : Closed cup: <0°C (<32°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not applicable.
- Lower and upper explosive (flammable) limits** : Lower: 3.3%  
Upper: 19%
- Vapor pressure** : 3.5 psia [37.8°C (100°F)]
- Vapor density** : Not available.
- Relative density** : 0.79
- Solubility** : Not available.
- Solubility in water** : Completely.
- Partition coefficient: n-octanol/water** : -0.31
- Auto-ignition temperature** : >365°C (>689°F)
- Decomposition temperature** : Not available.

## Section 9. Physical and chemical properties

**Viscosity** : Not available.

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**Incompatible materials** : Reactive or incompatible with the following materials:  
Strongly oxidizing material.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	7 g/kg	-
light petroleum distillate	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
methanol	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
benzene	LD50 Oral	Rat	930 mg/kg	-

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-



## Section 11. Toxicological information

light petroleum distillate	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Mild irritant	Human	-	8 hours 140 parts per million	-
methanol	Eyes - Moderate irritant	Man	-	1 hours 500 parts per million	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
benzene	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	88 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

### Conclusion/Summary

**Skin** : Causes skin irritation.  
**Eyes** : Causes serious eye irritation.

### Sensitization

**Conclusion/Summary** : Not available.

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
benzene	-	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic Metabolic activation: Mammalian Erythrocyte Micronucleus Test	Positive

**Conclusion/Summary** : May cause genetic defects.

### Carcinogenicity

**Conclusion/Summary** : May cause cancer.

### Classification

Product/ingredient name	OSHA	IARC	NTP
light petroleum distillate	-	2B	-
benzene	+	1	Known to be a human carcinogen.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
light petroleum distillate	Category 3	Not applicable.	Narcotic effects
methanol	Category 1	Oral	optic nerve

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
benzene	Category 1	Inhalation	haematopoietic system

### Aspiration hazard

Name	Result
light petroleum distillate	ASPIRATION HAZARD - Category 1
benzene	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. Loss of coordination. Headache. Fatigue.
- Skin contact** : Causes skin irritation.
- Ingestion** : May be fatal if swallowed and enters airways.

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

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

**Conclusion/Summary** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.

## Section 11. Toxicological information

<b>Mutagenicity</b>	: May cause genetic defects.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Denatured Ethanol E98	203192.8	N/A	N/A	N/A	N/A
ethanol	7000	N/A	N/A	124.7	N/A
light petroleum distillate	5000	N/A	N/A	N/A	N/A
methanol	100	300	64000	3	N/A
benzene	930	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 5680 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
light petroleum distillate	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Acute EC50 17.5 mg/l Marine water	Crustaceans - Artemia sp. - Nauplii	48 hours
methanol	Acute EC50 1.5 mg/l Marine water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute EC50 16.912 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 3289 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 290 mg/l Fresh water	Fish - Danio rerio - Egg	96 hours
benzene	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 29000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 1600000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute EC50 9230 µg/l Fresh water	Daphnia - Daphnia magna -	48 hours

## Section 12. Ecological information

		Neonate	
	Acute LC50 21 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 5.28 ul/L Fresh water	Fish - Oncorhynchus gorboscha - Fry	96 hours
	Chronic NOEC 98 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 1.5 to 5.4 ul/L Marine water	Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling)	4 weeks

**Conclusion/Summary** : Not available.

### Persistence and degradability

**Conclusion/Summary** : There is no data for the mixture itself.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Denatured Ethanol E98	-0.31	-	low
ethanol	-0.35	-	low
light petroleum distillate	-	10 to 2500	high
water	-1.38	-	low
methanol	-0.77	<10	low
benzene	2.13	11	low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.





**Mobility** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	UN1987	Not determined.	Not determined.	UN1987	UN1987	UN1987
UN proper shipping name	Alcohols, n.o.s.	-	-	ALCOHOLS, N. O.S. (ethanol, light petroleum distillate)	ALCOHOLS, N. O.S. (ethanol, light petroleum distillate)	Alcohols, n.o.s. (ethanol, light petroleum distillate)
Transport hazard class(es)	3	-	-	3	3	3
Label						
Packing group	II	-	-	II	II	II
Environmental hazards	No.	-	-	No.	Marine Pollutant: No	No.

### Additional information

- DOT Classification** : **Reportable quantity** 5000 lbs / 2270 kg [759.08 gal / 2873.4 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.  
**Limited quantity** Yes.  
**Packaging instruction** Exceptions: 4b, 150. Non-bulk: 202. Bulk: 242.  
**Quantity limitation** Passenger aircraft/rail: 5 L. Cargo aircraft: 60 L.  
**Special provisions** 172, IB2, T7, TP1, TP8, TP28
- ADR/RID** : **Hazard identification number** 33  
**Limited quantity** 1 L  
**Special provisions** 601, 274, 640D  
**Tunnel code** (D/E)
- IMDG** : **Emergency schedules** F-E, S-D  
**Special provisions** 274
- IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.  
**Special provisions** A3, A180

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : **Clean Water Act (CWA) 307:** benzene  
**Clean Water Act (CWA) 311:** benzene

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed

**Clean Air Act Section 602 Class I Substances** : Not listed

## Section 15. Regulatory information

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : FLAMMABLE LIQUIDS - Category 2  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
GERM CELL MUTAGENICITY - Category 1  
CARCINOGENICITY - Category 1A  
ASPIRATION HAZARD - Category 1

#### Composition/information on ingredients

Name	%	Classification
ethanol	93 - 97	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2
light petroleum distillate	1.96 - 2.49	EYE IRRITATION - Category 2A FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
methanol	0.04 - 0.5	ASPIRATION HAZARD - Category 1 FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (optic nerve) (oral) - Category 1
benzene	0 - 0.2	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A GERM CELL MUTAGENICITY (inhalation) - Category 1B CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (haematopoietic system) (inhalation) - Category 1 ASPIRATION HAZARD - Category 1

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	benzene	71-43-2	0 - 0.2
<b>Supplier notification</b>	benzene	71-43-2	0 - 0.2

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

**Massachusetts** : The following components are listed: ETHYL ALCOHOL; DENATURED ALCOHOL; GASOLINE

**New York** : The following components are listed: Benzene

## Section 15. Regulatory information

**New Jersey** : The following components are listed: ETHYL ALCOHOL; ALCOHOL; GASOLINE; GASOLINE, NATURAL; BENZENE

**Pennsylvania** : The following components are listed: DENATURED ALCOHOL; ETHANOL; BENZENE; BENZOL DILUENT

### California Prop. 65

**⚠ WARNING:** This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	No significant risk level	Maximum acceptable dosage level
Methanol	-	Yes.
Benzene	Yes.	Yes.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

**Australia** : All components are listed or exempted.  
**Canada** : All components are listed or exempted.  
**China** : All components are listed or exempted.  
**Europe** : All components are listed or exempted.  
**New Zealand** : All components are listed or exempted.  
**Philippines** : All components are listed or exempted.  
**Republic of Korea** : All components are listed or exempted.  
**Taiwan** : All components are listed or exempted.  
**United States** : All components are listed or exempted.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.), Fourth Edition

Health	*	2
Flammability		3
Physical hazards		0

**Caution:** HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

## Section 16. Other information

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A GERM CELL MUTAGENICITY - Category 1 CARCINOGENICITY - Category 1A ASPIRATION HAZARD - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Expert judgment

### History

**Date of printing** : 07/22/2019

**Date of issue/Date of revision** : 07/22/2019

**Date of previous issue** : 05/22/2015

**Version** : 2

**Key to abbreviations** : ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
DOT = Department of Transportation  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
N/A = Not available  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
SGG = Segregation Group  
TDG = Transportation of Dangerous Goods  
UN = United Nations

**References** : Not available.

▣ Indicates information that has changed from previously issued version.

### Notice to reader



## Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.