



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** E-85 (Fuel Ethanol)

**Other means of identification**  
**Synonyms** E-85 \* Light Petroleum Distillate \* Mixed Petroleum Hydrocarbon

**Recommended use** Fuel.

**Recommended restrictions** Uses other than the recommended use.

**Manufacturer/Importer/Supplier/Distributor information**

**Company name** CHS Inc.

**Address** P.O. Box 64089  
 Mail Station 525  
 St. Paul, MN 55164-0089  
 United States of America

**Telephone numbers** Transportation Emergency (CHEMTREC):  
 1-800-424-9300  
 Technical Information:  
 1-651-355-8443  
 SDS Information:  
 1-651-355-8445

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable liquids	Category 2
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Germ cell mutagenicity	Category 1B
	Carcinogenicity	Category 1A
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 1 (Hematopoietic system)
	Specific target organ toxicity, repeated exposure	Category 2 (Central nervous system)
<b>Environmental hazards</b>	Aspiration hazard	Category 1
	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
<b>OSHA defined hazards</b>	Not classified.	

### Label elements



**Signal word** Danger

**Hazard statement** Highly flammable liquid and vapor. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs (Hematopoietic system) through prolonged or repeated exposure. May cause damage to organs (Central nervous system) through prolonged or repeated exposure. May be fatal if swallowed and enters airways. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

**Precautionary statement**

**Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. 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. If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention. In case of fire: Use appropriate media to extinguish. Collect spillage.

**Storage**

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

**Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)**

None known.

**Supplemental information**

None.

**3. Composition/information on ingredients**

**Mixtures**

Chemical name	CAS number	%
Ethanol	64-17-5	60 - 90
Gasoline	86290-81-5	10 - 40
Gasoline, natural	8006-61-9	10 - 40
Butane	106-97-8	3 - 5
Toluene	108-88-3	1 - 3
Xylene	1330-20-7	1 - 3
Benzene	71-43-2	0.3 - 1
Ethylbenzene	100-41-4	0.3 - 1
n-Hexane	110-54-3	0.3 - 1
Naphthalene	91-20-3	0.3

**Composition comments**

Any concentration shown as a range is to protect confidentiality or is due to batch variation. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First-aid measures**

**Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Call a poison center or doctor/physician if you feel unwell.

**Skin contact**

Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

**Eye contact**

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Ingestion**

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

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

Aspiration may cause pulmonary edema and pneumonitis. Be aware that symptoms of chemical pneumonia (shortness of breath) may occur several hours after exposure. May cause drowsiness or dizziness. Narcosis. Headache. Nausea, vomiting. Behavioral changes. Decrease in motor functions. Unconsciousness. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Cyanosis (blue tissue condition, nails, lips, and/or skin). Prolonged exposure may cause chronic effects.

<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.
<b>5. Fire-fighting measures</b>	
<b>Suitable extinguishing media</b>	Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed such as: Carbon monoxide. Carbon dioxide.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Highly flammable liquid and vapor.

## 6. Accidental release measures

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

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS. The product is insoluble in water.

**Environmental precautions**

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

## 7. Handling and storage

**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

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

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Do not store above the following temperature: 113°C (235.4°F). Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection****Occupational exposure limits****US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	5 ppm
	TWA	1 ppm

**US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Ethanol (CAS 64-17-5)	PEL	1900 mg/m3
		1000 ppm
Ethylbenzene (CAS 100-41-4)	PEL	435 mg/m3
		100 ppm
Naphthalene (CAS 91-20-3)	PEL	50 mg/m3
		10 ppm
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3
		500 ppm
Xylene (CAS 1330-20-7)	PEL	435 mg/m3
		100 ppm

**US. OSHA Table Z-2 Permissible Exposure Limits (PEL) (29 CFR 1910.1000)**

Components	Type	Value
Benzene (CAS 71-43-2)	Ceiling	25 ppm
	TWA	10 ppm
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

**US. ACGIH Threshold Limit Values (TLV)**

Components	Type	Value
Benzene (CAS 71-43-2)	TWA	0.02 ppm
Butane (CAS 106-97-8)	STEL	1000 ppm
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm
Gasoline (CAS 86290-81-5)	STEL	500 ppm
	TWA	300 ppm
Naphthalene (CAS 91-20-3)	TWA	10 ppm
n-Hexane (CAS 110-54-3)	TWA	50 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm
Xylene (CAS 1330-20-7)	TWA	20 ppm

**NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended**

Components	Type	Value
Benzene (CAS 71-43-2)	IDLH	1.2 %
		500 ppm
Butane (CAS 106-97-8)	IDLH	1.6 %
		2000 ppm

**NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended**

Components	Type	Value
Ethanol (CAS 64-17-5)	IDLH	1600 ppm
		3.3 %
Ethylbenzene (CAS 100-41-4)	IDLH	3300 ppm
		0.8 %
Naphthalene (CAS 91-20-3)	IDLH	800 ppm
		0.9 %
n-Hexane (CAS 110-54-3)	IDLH	250 ppm
		1.1 %
Toluene (CAS 108-88-3)	IDLH	1100 ppm
		1.1 %
		500 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	1 ppm
	TWA	0.1 ppm
Butane (CAS 106-97-8)	TWA	1900 mg/m3
		800 ppm
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
Ethylbenzene (CAS 100-41-4)	STEL	545 mg/m3
		125 ppm
	TWA	435 mg/m3
		100 ppm
Naphthalene (CAS 91-20-3)	STEL	75 mg/m3
		15 ppm
	TWA	50 mg/m3
		10 ppm
n-Hexane (CAS 110-54-3)	TWA	180 mg/m3
		50 ppm
Toluene (CAS 108-88-3)	STEL	560 mg/m3
		150 ppm
	TWA	375 mg/m3
		100 ppm
Xylene (CAS 1330-20-7)	STEL	655 mg/m3
		150 ppm
	TWA	435 mg/m3
		100 ppm

**Biological limit values**

ACGIH Components	Value	Determinant	Specimen	Sampling Time
Benzene (CAS 71-43-2)	500 µg/g	t,t-Muconic acid	Creatinine in urine	*

**ACGIH Biological Exposure Indices (BEI)**

Components	Value	Determinant	Specimen	Sampling Time
Benzene (CAS 71-43-2)	25 µg/g	S-Phenylmercapturic acid	Creatinine in urine	*
Ethylbenzene (CAS 100-41-4)	150 mg/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*
n-Hexane (CAS 110-54-3)	0.5 mg/l	2,5-Hexanedione, without hydrolysis	Urine	*
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*
Xylene (CAS 1330-20-7)	0.3 g/g	Methylhippuric acids	Creatinine in urine	*

\* - For sampling details, please see the source document.

**Exposure guidelines****US - California OELs: Skin designation**

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.

**US - Minnesota Haz Subs: Skin designation applies**

Toluene (CAS 108-88-3)	Skin designation applies.
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**US ACGIH Threshold Limit Values: Skin designation**

Benzene (CAS 71-43-2)	Danger of cutaneous absorption
Naphthalene (CAS 91-20-3)	Danger of cutaneous absorption
n-Hexane (CAS 110-54-3)	Danger of cutaneous absorption

**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation 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. Provide eyewash station and safety shower.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear chemical splash goggles, face shield, or safety glasses with side shields as appropriate for risk of exposure.

**Skin protection****Hand protection**

Wear appropriate chemical resistant gloves. Nitrile gloves are recommended. 4-8h break through time The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

**Skin protection****Other**

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Long sleeved clothing. Use of impervious boots is recommended.

**Respiratory protection**

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge and full facepiece. Wear a NIOSH-approved (or equivalent) respirator as needed. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

Physical state	Liquid.
Form	Liquid.
Color	Light. Golden brown.

Odor	Gasoline.
Odor threshold	10 ppm
pH	Not applicable (negligibly soluble in water).
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	-5.8 °F (-21 °C) Tag Closed Cup
Evaporation rate	Slower.
Flammability (solid, gas)	Not applicable.

### Upper/lower flammability or explosive limits

Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure	Not available.
Vapor density	> 1 (Air = 1)
Relative density	0.789

### Solubility(ies)

Solubility (water)	Partially soluble in water.
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Partition coefficient (n-octanol/water)	Not applicable, product is a mixture.
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Auto-ignition temperature	Not available.
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Decomposition temperature	Not available.
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Viscosity	Not available.
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### Other information

Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
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Chemical stability	Material is stable under normal conditions.
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Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
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Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Contact with incompatible materials.
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Incompatible materials	Strong oxidizing agents. Acids. Halogens. Alkalis.
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Hazardous decomposition products	No hazardous decomposition products are known.
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## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
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Skin contact	Causes skin irritation.
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Eye contact	Causes serious eye irritation.
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Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
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**Symptoms related to the physical, chemical and toxicological characteristics**

Aspiration may cause pulmonary edema and pneumonitis. Be aware that symptoms of chemical pneumonia (shortness of breath) may occur several hours after exposure. May cause drowsiness or dizziness. Narcosis. Headache. Nausea, vomiting. Behavioral changes. Decrease in motor functions. Unconsciousness. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Cyanosis (blue tissue condition, nails, lips, and/or skin). Prolonged exposure may cause chronic effects.

**Information on toxicological effects**

**Acute toxicity** Not expected to be acutely toxic.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Benzene (CAS 71-43-2)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rabbit	> 8260 mg/kg
<b>Inhalation</b>		
<i>Vapor</i>		
LC50	Rat	44.66 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	810 mg/l
Butane (CAS 106-97-8)		
<b><u>Acute</u></b>		
<b>Inhalation</b>		
LC50	Rat	658 mg/l, 4 Hours
Ethanol (CAS 64-17-5)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rat	> 2000 mg/kg
<b>Inhalation</b>		
<i>Vapor</i>		
LC50	Mouse	39 g/m3, 4 Hours
<b>Oral</b>		
LD50	Rat	7000 - 11000 mg/kg
Ethylbenzene (CAS 100-41-4)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rabbit	15400 mg/kg
<b>Inhalation</b>		
LC50	Rat	17.4 mg/l, 4 hours
<b>Oral</b>		
LD50	Rat	3500 - 4700 mg/kg
Naphthalene (CAS 91-20-3)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rat	> 2500 mg/kg
<b>Inhalation</b>		
<i>Vapor</i>		
LC50	Rat	> 0.4 mg/l, 4 Hours
<b>Oral</b>		
LD50	Mouse	553 mg/kg
n-Hexane (CAS 110-54-3)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rabbit	> 2000 mg/kg



Components	Species	Test Results
<b>Inhalation</b>		
<i>Vapor</i>		
LC50	Mouse, Rat	169.2 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	28710 mg/kg
Toluene (CAS 108-88-3)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	12200 mg/kg
<b>Inhalation</b>		
<i>Vapor</i>		
LC50	Rat	28.1 mg/l, 4 Hours
Xylene (CAS 1330-20-7)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	3523 mg/kg
<b>Skin corrosion/irritation</b>	Causes skin irritation.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	May cause genetic defects.	
<b>Carcinogenicity</b>	May cause cancer.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Benzene (CAS 71-43-2)	1 Carcinogenic to humans.	
Ethylbenzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.	
Gasoline (CAS 86290-81-5)	2B Possibly carcinogenic to humans.	
Gasoline, natural (CAS 8006-61-9)	2B Possibly carcinogenic to humans.	
Naphthalene (CAS 91-20-3)	2B Possibly carcinogenic to humans.	
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.	
Xylene (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.	
<b>NTP Report on Carcinogens</b>		
Benzene (CAS 71-43-2)	Known To Be Human Carcinogen.	
Naphthalene (CAS 91-20-3)	Known To Be Human Carcinogen.	
	Reasonably Anticipated to be a Human Carcinogen.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)</b>		
Benzene (CAS 71-43-2)	Cancer	
<b>Reproductive toxicity</b>	Suspected of damaging fertility or the unborn child.	
<b>Specific target organ toxicity - single exposure</b>	May cause drowsiness or dizziness.	
<b>Specific target organ toxicity - repeated exposure</b>	Causes damage to organs (Hematopoietic system) through prolonged or repeated exposure. May cause damage to organs (Central nervous system) through prolonged or repeated exposure.	
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.	
<b>12. Ecological information</b>		
<b>Ecotoxicity</b>	Toxic to aquatic life with long lasting effects.	

Components		Species	Test Results
Benzene (CAS 71-43-2)			
<b>Aquatic</b>			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	29 mg/l, 72 Hours
Crustacea	EC50	Daphnia magna	10 mg/l, 48 hours
Fish	LC50	Oncorhynchus mykiss	5.3 mg/l, 96 hours
<i>Chronic</i>			
Algae	NOEC	Selenastrum capricornutum	41 mg/l, 8 days
Crustacea	NOEC	Ceriodaphnia dubia	3 mg/l, 7 days
Fish	NOEC	Pimephales promelas	0.8 mg/l, 32 days
Ethanol (CAS 64-17-5)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	LC50	Ceriodaphnia dubia	5012 mg/l, 48 hours
		Daphnia magna	454 mg/l, 11 days
Fish	LC50	Pimephales promelas	13480 mg/l, 96 hours
<i>Chronic</i>			
Crustacea	NOEC	Ceriodaphnia dubia	9.6 mg/l, 10 days
Ethylbenzene (CAS 100-41-4)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	1.81 - 2.38 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4.2 mg/l, 96 hours
<i>Chronic</i>			
Crustacea	EC50	Ceriodaphnia dubia	3.6 mg/l, 7 days
Naphthalene (CAS 91-20-3)			
<b>Aquatic</b>			
Algae	EC50	Diatom (Skeletonema costatum)	0.4 mg/l, 72 Hours
<i>Acute</i>			
Crustacea	EC50	Daphnia magna	2.16 mg/l, 48 hours
Fish	LC50	Pimephales promelas	6.08 mg/l, 96 hours
<i>Chronic</i>			
Crustacea	NOEC	Water flea (Daphnia pulex)	0.59 mg/l, 125 days
Fish	NOEC	Coho salmon,silver salmon (Oncorhynchus kisutch)	0.37 mg/l, 40 days
<b>Terrestrial</b>			
Bacteria	IC50	Nitrosomonas sp.	29 mg/l, 24 Hours
n-Hexane (CAS 110-54-3)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	LC50	Daphnia magna	2.1 mg/l, 48 hours
Fish	LC50	Pimephales promelas	2.5 mg/l, 96 hours
Toluene (CAS 108-88-3)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	EC50	Daphnia magna	11.5 mg/l, 48 hours
Fish	LC50	Oncorhynchus kisutch	5.5 mg/l, 96 hours
<i>Chronic</i>			
Crustacea	NOEC	Ceriodaphnia dubia	0.74 mg/l, 7 days

Components	Species	Test Results	
Fish	NOEC	Oncorhynchus kisutch	1.4 mg/l, 40 days
Xylene (CAS 1330-20-7)			
<b>Aquatic</b>			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.6 mg/l, 96 hours
<b>Persistence and degradability</b>	No data is available on the degradability of this product.		
<b>Bioaccumulative potential</b>	No data available on bioaccumulation.		
<b>Partition coefficient n-octanol / water (log Kow)</b>			
Benzene (CAS 71-43-2)			2.13
Butane (CAS 106-97-8)			2.89
Ethanol (CAS 64-17-5)			-0.31
Ethylbenzene (CAS 100-41-4)			3.15
Naphthalene (CAS 91-20-3)			3.3
Toluene (CAS 108-88-3)			2.73
n-Hexane (CAS 110-54-3)			3.9
<b>Mobility in soil</b>	The product is partially soluble in water.		
<b>Other adverse effects</b>	Oil spills are generally hazardous to the environment. The product contains volatile organic compounds which have a photochemical ozone creation potential. This product contains one or more substances identified as hazardous air pollutants (HAPs) per the US Federal Clean Air Act (see section 15).		

### 13. Disposal considerations

<b>Disposal instructions</b>	Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	D001: Waste Flammable material with a flash point <140 F D018: Waste Benzene The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

<b>DOT</b>	
<b>UN number</b>	UN3475
<b>UN proper shipping name</b>	Ethanol and gasoline mixture or Ethanol and motor spirit mixture or Ethanol and petrol mixture, with more than 10 percent alcohol
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary hazard</b>	-
<b>Label(s)</b>	3
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	144, 177, IB2, T4, TP1
<b>Packaging exceptions</b>	150
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	242
<b>IATA</b>	
<b>UN number</b>	UN3475
<b>UN proper shipping name</b>	Ethanol and petrol mixture with more than 10% ethanol

**Transport hazard class(es)**

**Class** 3  
**Subsidiary hazard** -  
**Packing group** II  
**Environmental hazards** Yes  
**ERG Code** 3L

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

**UN number** UN3475  
**UN proper shipping name** ETHANOL AND GASOLINE MIXTURE or ETHANOL AND MOTOR SPIRIT MIXTURE or ETHANOL AND PETROL MIXTURE, with more than 10% ethanol

**Transport hazard class(es)**

**Class** 3  
**Subsidiary hazard** -  
**Packing group** II  
**Environmental hazards**  
**Marine pollutant** Yes

**EmS** F-E, S-E

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

**15. Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Benzene (CAS 71-43-2)	Cancer
	Central nervous system
	Blood
	Aspiration
	Skin
	Eye
	respiratory tract irritation
	Flammability

**Toxic Substances Control Act (TSCA)**

One or more components of the mixture are not on the TSCA 8(b) inventory or are designated "inactive".

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Flammable (gases, aerosols, liquids, or solids)  
 Skin corrosion or irritation  
 Serious eye damage or eye irritation  
 Germ cell mutagenicity  
 Carcinogenicity  
 Reproductive toxicity  
 Specific target organ toxicity (single or repeated exposure)  
 Aspiration hazard

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Benzene	71-43-2	0.3 - 1

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Ethylbenzene	100-41-4	0.3 - 1
Naphthalene	91-20-3	0.3
n-Hexane	110-54-3	0.3 - 1
Toluene	108-88-3	1 - 3
Xylene	1330-20-7	1 - 3

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Benzene (CAS 71-43-2)  
 Ethylbenzene (CAS 100-41-4)  
 Naphthalene (CAS 91-20-3)  
 n-Hexane (CAS 110-54-3)  
 Toluene (CAS 108-88-3)  
 Xylene (CAS 1330-20-7)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Butane (CAS 106-97-8)

**Safe Drinking Water Act (SDWA)** Contains component(s) regulated under the Safe Drinking Water Act.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Toluene (CAS 108-88-3) 6594

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Toluene (CAS 108-88-3) 35 %WW

**DEA Exempt Chemical Mixtures Code Number**

Toluene (CAS 108-88-3) 594

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Ethanol (CAS 64-17-5) Low priority

**US state regulations****US. Massachusetts RTK - Substance List**

Benzene (CAS 71-43-2)  
 Butane (CAS 106-97-8)  
 Ethanol (CAS 64-17-5)  
 Ethylbenzene (CAS 100-41-4)  
 Gasoline, natural (CAS 8006-61-9)  
 Naphthalene (CAS 91-20-3)  
 n-Hexane (CAS 110-54-3)  
 Toluene (CAS 108-88-3)  
 Xylene (CAS 1330-20-7)

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

Benzene (CAS 71-43-2)  
 Butane (CAS 106-97-8)  
 Ethanol (CAS 64-17-5)  
 Ethylbenzene (CAS 100-41-4)  
 Gasoline, natural (CAS 8006-61-9)  
 Naphthalene (CAS 91-20-3)  
 n-Hexane (CAS 110-54-3)  
 Toluene (CAS 108-88-3)  
 Xylene (CAS 1330-20-7)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Benzene (CAS 71-43-2)  
 Butane (CAS 106-97-8)  
 Ethanol (CAS 64-17-5)  
 Ethylbenzene (CAS 100-41-4)  
 Gasoline (CAS 86290-81-5)  
 Naphthalene (CAS 91-20-3)  
 n-Hexane (CAS 110-54-3)  
 Toluene (CAS 108-88-3)  
 Xylene (CAS 1330-20-7)

**US. Rhode Island RTK**

Benzene (CAS 71-43-2)

Butane (CAS 106-97-8)  
Ethanol (CAS 64-17-5)  
Ethylbenzene (CAS 100-41-4)  
Gasoline, natural (CAS 8006-61-9)  
Naphthalene (CAS 91-20-3)  
n-Hexane (CAS 110-54-3)  
Toluene (CAS 108-88-3)  
Xylene (CAS 1330-20-7)

### California Proposition 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. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### California Proposition 65 - CRT: Listed date/Carcinogenic substance

Benzene (CAS 71-43-2)	Listed: February 27, 1987
Ethylbenzene (CAS 100-41-4)	Listed: June 11, 2004
Naphthalene (CAS 91-20-3)	Listed: April 19, 2002

#### California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
Toluene (CAS 108-88-3)	Listed: January 1, 1991

#### California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
n-Hexane (CAS 110-54-3)	Listed: December 15, 2017

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

**Issue date** 22-August-2024  
**Revision date** -  
**Version #** 01  
**HMIS® ratings** Health: 3\*  
Flammability: 3  
Physical hazard: 0

### NFPA ratings



### Disclaimer

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