



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

Physical hazards	Flammable liquids	Category 2
Health hazards	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)
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	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.
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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.

Indication of immediate medical attention and special treatment needed	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.
General information	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.
5. Fire-fighting measures	
Suitable extinguishing media	Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may 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.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	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.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	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.
Environmental precautions	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. 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.
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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.

Partition coefficient (n-octanol/water) Not applicable, product is a mixture.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

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.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

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.

Incompatible materials Strong oxidizing agents. Acids. Halogens. Alkalis.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation May cause drowsiness or dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.

Skin contact Causes skin irritation.

Eye contact Causes serious eye irritation.

Ingestion Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

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.

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

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

Components		Species	Test Results
Benzene (CAS 71-43-2)			
Aquatic			
<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)			
Aquatic			
<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)			
Aquatic			
<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)			
Aquatic			
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
Terrestrial			
Bacteria	IC50	Nitrosomonas sp.	29 mg/l, 24 Hours
n-Hexane (CAS 110-54-3)			
Aquatic			
<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)			
Aquatic			
<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)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.6 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available on bioaccumulation.		
Partition coefficient n-octanol / water (log Kow)			
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	
Mobility in soil	The product is partially soluble in water.		
Other adverse effects	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

Disposal instructions	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.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	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.
Waste from residues / unused products	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.
Contaminated packaging	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

DOT	
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 percent alcohol
Transport hazard class(es)	
Class	3
Subsidiary hazard	-
Label(s)	3
Packing group	II
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	144, 177, IB2, T4, TP1
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242
IATA	
UN number	UN3475
UN proper shipping name	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.

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

Notice to reader:

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