



# SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Product identifier</b>	<b>E-85 Gasoline</b>
<b>Other means of identification</b>	Not available
<b>Recommended use</b>	Fuel
<b>Recommended restrictions</b>	None known.
<b>Manufacturer information</b>	Irving Oil Refining G.P. Box 1260 Saint John, NB E2L 4H6 CA Phone: (506) 202-2000 Refinery: (506) 202-3000
<b>Supplier</b>	See above.

## 2. Hazards Identification

<b>Physical hazards</b>	Flammable liquids	Category 2
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Germ cell mutagenicity	Category 1
	Carcinogenicity	Category 1A
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>WHMIS 2015 defined hazards</b>	Not classified	
<b>Label elements</b>		



**Signal word** Danger

**Hazard statement** Highly flammable liquid and vapor.  
Causes serious eye irritation.  
Causes skin irritation.  
May cause genetic defects.  
May cause cancer.  
Suspected of damaging fertility or the unborn child.  
May be fatal if swallowed and enters airways.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
May cause damage to organs through prolonged or repeated exposure.

**Precautionary statement**

**Prevention** 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.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe mist or vapor.  
Use only outdoors or in a well-ventilated area.  
Wash thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.

<b>Response</b>	In case of fire: Use appropriate media to extinguish. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Specific treatment (see information on this label). Wash contaminated clothing 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 SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF exposed: Call a POISON CENTER or doctor/physician. Get medical advice/attention if you feel unwell.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)</b>	None known
<b>WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)</b>	None known
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	Not applicable.

### 3. Composition/Information on Ingredients

#### Mixture

Chemical name	Common name and synonyms	CAS number	%
Ethanol		64-17-5	68 - 71
Gasoline		8006-61-9	21 - 24
Xylene		1330-20-7	2 - 5
Toluene		108-88-3	0.5 - 1.5
Benzene		71-43-2	0.1 - 1
Hexane		110-54-3	0.1 - 1

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

<b>Composition comments</b>	*Contains a variety of aromatic and aliphatic hydrocarbons including: benzene, n-hexane, toluene and xylene Gasoline is a complex mixture of hydrocarbons. Its exact composition depends on the source of the crude oil from which it was produced and the refining methods used. Gasoline contains hundreds of individual organic chemicals. This section identifies only some of the well-known chemical constituents.
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### 4. First Aid Measures

<b>Inhalation</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
<b>Skin contact</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Specific treatment (see information on this label).
<b>Eye contact</b>	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.
<b>Ingestion</b>	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.
<b>Most important symptoms/effects, acute and delayed</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Symptoms may be delayed.

**General information**

IF exposed or concerned: Get medical advice/attention. 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. Take off all contaminated clothing immediately. Wash contaminated clothing before reuse. Keep away from sources of ignition. No smoking. Avoid contact with eyes and skin. Wear rubber gloves and safety glasses with side shields. Keep out of reach of children.

## 5. Fire Fighting Measures

<b>Suitable extinguishing media</b>	Stop the flow of gas. Carbon dioxide. Dry chemical. Foam.
<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>	Container may explode in heat of fire. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Fire-fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<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.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Polycyclic aromatic hydrocarbons (PAHs). Phenols. Aromatic hydrocarbons.

## 6. Accidental Release Measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep out of low areas. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not breathe mist or vapor. Avoid inhalation of vapors or mists. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Never return spills to original containers for re-use. Following product recovery, flush area with water. Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS. Prevent entry into waterways, sewers, basements or confined areas.
<b>Environmental precautions</b>	Do not discharge into lakes, streams, ponds or public waters.

## 7. Handling and Storage

<b>Precautions for safe handling</b>	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. Vapors may form explosive mixtures with air. Take precautionary measures against static discharges. Avoid contact with eyes, skin and clothing. Wear appropriate personal protective equipment. Do not breathe mist or vapor. Provide adequate ventilation. Avoid contact during pregnancy/while nursing. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Keep away from heat, open flames or other sources of ignition. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children. Shipping: Load at normal temperature (up to 38°C) and pressure.

## 8. Exposure Controls/Personal Protection

### Occupational exposure limits

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	8 mg/m3 2.5 ppm
	TWA	1.6 mg/m3 0.5 ppm
Ethanol (CAS 64-17-5)	TWA	1880 mg/m3 1000 ppm
Hexane (CAS 110-54-3)	TWA	176 mg/m3 50 ppm
Toluene (CAS 108-88-3)	TWA	188 mg/m3 50 ppm
Xylene (CAS 1330-20-7)	STEL	651 mg/m3 150 ppm
	TWA	434 mg/m3 100 ppm

#### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	2.5 ppm
	TWA	0.5 ppm
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Hexane (CAS 110-54-3)	TWA	20 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm
Xylene (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

#### Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	2.5 ppm
	TWA	0.5 ppm
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Hexane (CAS 110-54-3)	TWA	50 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm
Xylene (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

#### Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	2.5 ppm
	TWA	0.5 ppm
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Hexane (CAS 110-54-3)	TWA	50 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm
Xylene (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

#### Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	15.5 mg/m3 5 ppm
		TWA
	TWA	1880 mg/m3

**Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)**

<b>Components</b>	<b>Type</b>	<b>Value</b>
		1000 ppm
Gasoline (CAS 8006-61-9)	STEL	1480 mg/m3
		500 ppm
	TWA	890 mg/m3
		300 ppm
Hexane (CAS 110-54-3)	TWA	176 mg/m3
Toluene (CAS 108-88-3)		50 ppm
	TWA	188 mg/m3
Xylene (CAS 1330-20-7)		50 ppm
	STEL	651 mg/m3
	TWA	150 ppm
		434 mg/m3
		100 ppm

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

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

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
Ethanol (CAS 64-17-5)	PEL	1900 mg/m3
		1000 ppm
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 (29 CFR 1910.1000)**

<b>Components</b>	<b>Type</b>	<b>Value</b>
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**

<b>Components</b>	<b>Type</b>	<b>Value</b>
Benzene (CAS 71-43-2)	STEL	2.5 ppm
	TWA	0.5 ppm
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Hexane (CAS 110-54-3)	TWA	50 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm
Xylene (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
Benzene (CAS 71-43-2)	STEL	1 ppm
	TWA	0.1 ppm
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
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

## Biological limit values

### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Benzene (CAS 71-43-2)	25 µg/g	S-Phenylmercapturic acid	Creatinine in urine	*
Hexane (CAS 110-54-3)	0.4 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)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

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

## Exposure guidelines

### Canada - Alberta OELs: Skin designation

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

### Canada - British Columbia OELs: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Hexane (CAS 110-54-3)	Can be absorbed through the skin.

### Canada - Manitoba OELs: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Hexane (CAS 110-54-3)	Can be absorbed through the skin.

### Canada - Ontario OELs: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Hexane (CAS 110-54-3)	Can be absorbed through the skin.

### Canada - Quebec OELs: Skin designation

Hexane (CAS 110-54-3)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.

### Canada - Saskatchewan OELs: Skin designation

Hexane (CAS 110-54-3)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.

### US ACGIH Threshold Limit Values: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Hexane (CAS 110-54-3)	Can be absorbed through the skin.

**Appropriate engineering controls** Ensure adequate ventilation.

## Individual protection measures, such as personal protective equipment

**Eye/face protection** Face shield or chemical goggles.

### Skin protection

**Hand protection** Viton™.

**Other** Wear appropriate chemical resistant clothing. Use of protective coveralls and long sleeves is recommended. If clothing or footwear becomes contaminated with the product, remove it and completely decontaminate it before re-use, or discard it.

**Respiratory protection** For confined spaces, wear a NIOSH-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

**Thermal hazards** Not applicable.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using do not eat or drink.

## 9. Physical and Chemical Properties

<b>Appearance</b>	Clear
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Clear to Pale yellow

<b>Odor</b>	Sweet, Slight Gasoline
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not applicable
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	132.8 °F (56 °C)
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	0.78 @ 15°C (60°F)
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Flash point</b>	< 32.0 °F (< 0 °C) Closed Cup
<b>Evaporation rate</b>	Expected to be rapid.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	> 3.3 % (ethanol)
<b>Flammability limit - upper (%)</b>	< 19 % (ethanol)
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Not available.
<b>Auto-ignition temperature</b>	685.4 - 797 °F (363 - 425 °C) (ethanol)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

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## 10. Stability and Reactivity

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<b>Reactivity</b>	This product may react with strong oxidizing agents.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the flash point. Heat, open flames, static discharge, sparks and other ignition sources.
<b>Incompatible materials</b>	Acids. Halogens. Peroxides. Oxidizers. Nitric acid. Perchlorates.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Aromatic hydrocarbons.

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## 11. Toxicological Information

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<b>Routes of exposure</b>	Eye, Skin contact, Skin absorption, Inhalation, Ingestion.
<b>Information on likely routes of exposure</b>	
<b>Ingestion</b>	May be fatal if swallowed and enters airways.
<b>Inhalation</b>	May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful. May cause damage to organs by inhalation.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
Benzene (CAS 71-43-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Guinea pig	> 9400 mg/kg
	Rabbit	8263 mg/kg
		8260 mg/kg
<i>Inhalation</i>		
LC50	Mouse	9980 ppm
	Rat	44700 mg/m3, 4 Hours
		13700 mg/l/4h
		10000 ppm, 7 Hours
<i>Oral</i>		
LD50	Mouse	4700 mg/kg
	Rat	2990 mg/kg
		690 mg/kg
Ethanol (CAS 64-17-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 15800 mg/kg
<i>Inhalation</i>		
LC50	Mouse	39 mg/L, 4 Hours
	Rat	31623 ppm, 4 Hours
		20000 ppm, 10 Hours
		64.1 mg/l/4h
<i>Oral</i>		
LD50	Dog	5500 mg/kg
	Guinea pig	5600 mg/kg
	Mouse	3450 mg/kg
	Rat	7060 mg/kg
Gasoline (CAS 8006-61-9)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	3750 mg/kg
<i>Inhalation</i>		
LC50	Rat	5.2 mg/l/4h
<i>Oral</i>		
LD50	Rat	13600 mg/kg
Hexane (CAS 110-54-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	3000 mg/kg
<i>Inhalation</i>		
LC50	Mouse	48000 ppm, 4 Hours
	Rat	38500 mg/l/4h
<i>Oral</i>		
LD50	Rat	28710 mg/kg
Toluene (CAS 108-88-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	12196 mg/kg
		12125 mg/kg
		8390 mg/kg



Components	Species	Test Results
		14.1 ml/kg
<i>Inhalation</i>		
LC50	Mouse	7100 mg/L, 4 Hours 5320 ppm, 8 Hours 400 ppm, 24 Hours
	Rat	26700 ppm, 1 Hours <= 28800 mg/m <sup>3</sup> , 4 Hours 12200 ppm, 2 Hours 8000 ppm, 4 Hours 12.5 mg/l/4h
<i>Oral</i>		
LD50	Rat	> 5580 mg/kg 636 mg/kg
Xylene (CAS 1330-20-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	>= 1700 mg/kg
<i>Inhalation</i>		
LC50	Mouse	3907 ppm, 6 Hours
	Rat	6350 ppm, 4 Hours 29.1 mg/L, 4 Hours 27.6 mg/L, 4 Hours 21.7 mg/L, 4 Hours
<i>Oral</i>		
LD50	Mouse	5251 mL/kg 1590 mg/kg
	Rat	3523 - 8600 mg/kg
<b>Skin corrosion/irritation</b>	Causes skin irritation.	
<b>Exposure minutes</b>	Not available.	
<b>Erythema value</b>	Not available.	
<b>Oedema value</b>	Not available.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.	
<b>Corneal opacity value</b>	Not available.	
<b>Iris lesion value</b>	Not available.	
<b>Conjunctival reddening value</b>	Not available.	
<b>Conjunctival oedema value</b>	Not available.	
<b>Recover days</b>	Not available.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not available.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Mutagenicity</b>	May cause genetic defects. Mutagenic effects were observed in somatic and reproductive cells of live animals (rats and mice) exposed to high oral doses of ethanol. The mutagenicity of benzene has been extensively studied in rats and mice using inhalation and oral exposure techniques. Positive results have been obtained for many tests including and not limited to chromosome aberrations, micronuclei, sister chromatid exchanges, point mutations, DNA adducts, DNA repair, DNA damage, aneuploidy and sperm head abnormalities.	
<b>Carcinogenicity</b>	May cause cancer. Exposure of rats and mice to benzene by inhalation or ingestion routes has caused cancer of the lymph system (lymphoma), the blood (leukemia), and the bone marrow (myeloma). It has also caused tumours of the liver, zymbal gland, mammary gland, lungs, thymus, nasal and oral cavities.	
<b>ACGIH Carcinogens</b>		
Benzene (CAS 71-43-2)		A1 Confirmed human carcinogen.

**Canada - Alberta OELs: Carcinogen category**

Benzene (CAS 71-43-2) Confirmed human carcinogen.

**Canada - Manitoba OELs: carcinogenicity**

BENZENE (CAS 71-43-2) Confirmed human carcinogen.  
 ETHANOL (CAS 64-17-5) Confirmed animal carcinogen with unknown relevance to humans.  
 TOLUENE (CAS 108-88-3) Not classifiable as a human carcinogen.  
 XYLENE (O, M AND P ISOMERS) (CAS 1330-20-7) Not classifiable as a human carcinogen.

**Canada - Quebec OELs: Carcinogen category**

Benzene (CAS 71-43-2) Detected carcinogenic effect in humans.  
 Gasoline (CAS 8006-61-9) Detected carcinogenic effect in animals.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Benzene (CAS 71-43-2) Volume 29, Supplement 7, Volume 100F 1 Carcinogenic to humans.  
 Ethanol (CAS 64-17-5) Volume 44, Volume 96, Volume 100E  
 Volume 96, Volume 100E  
 Gasoline (CAS 8006-61-9) Volume 45 - 2B Possibly carcinogenic to humans.  
 Toluene (CAS 108-88-3) Volume 47, Volume 71 - 3 Not classifiable as to carcinogenicity to humans.  
 Xylene (CAS 1330-20-7) Volume 47, Volume 71 - 3 Not classifiable as to carcinogenicity to humans.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Benzene (CAS 71-43-2)  
 Ethanol (CAS 64-17-5)

**US NTP Report on Carcinogens: Known carcinogen**

Benzene (CAS 71-43-2) Known To Be Human Carcinogen.

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

Benzene (CAS 71-43-2) Cancer

**Reproductive toxicity**

Possible reproductive hazard. Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals. Suspected of damaging the unborn child. Suspected of damaging fertility.

**Teratogenicity**

Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals.

Xylene is considered fetotoxic in humans, based on observations of reduced fetal weight, delayed ossification and persistent behavioural effects in animal studies in the absence of maternal toxicity.

Toluene (benzene, methyl-) has caused fetotoxicity (reduced fetal weight), behavioural effects (effects on learning and memory) and hearing loss (in males). These effects have been observed in the offspring of rats exposed by inhalation to 1200 or 1800 ppm toluene. These effects were observed in the absence of maternal toxicity.

Animal studies demonstrate that ingestion of ethanol can cause embryotoxicity, teratogenicity and fetotoxicity in the presence of maternal toxicity.

**Specific target organ toxicity - single exposure**

Respiratory tract irritation. Narcotic effects.

**Specific target organ toxicity - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard**

May be fatal if swallowed and enters airways.

**Chronic effects**

Prolonged exposure may cause chronic effects.

Prolonged inhalation may be harmful.

May cause damage to organs through prolonged or repeated exposure.

Peripheral nerve damage has been observed following occupational exposure to hexane.

Prolonged or repeated overexposure can cause liver and kidney damage.

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**12. Ecological Information**

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**Ecotoxicity** See below**Ecotoxicological data Components**

		Species	Test Results
Benzene (CAS 71-43-2)			
Algae	IC50	Algae	29 mg/L, 72 Hours
Crustacea	EC50	Daphnia	12.18 mg/L, 48 Hours
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	8.76 - 15.6 mg/L, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)	7.2 - 11.7 mg/L, 96 hours

Components	Species		Test Results
Ethanol (CAS 64-17-5)			
Crustacea	EC50	Daphnia	11744.5 mg/L, 48 Hours
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	7.7 - 11.2 mg/L, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/L, 96 hours
Gasoline (CAS 8006-61-9)			
Algae	IC50	Algae	4700 mg/L, 72 Hours
Hexane (CAS 110-54-3)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/L, 96 hours
Toluene (CAS 108-88-3)			
Algae	IC50	Algae	433 mg/L, 72 Hours
Crustacea	EC50	Daphnia	7.645 mg/L, 48 Hours
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/L, 48 hours
Fish	LC50	Coho salmon, silver salmon (Oncorhynchus kisutch)	8.11 mg/L, 96 hours
Xylene (CAS 1330-20-7)			
<b>Aquatic</b>			
Fish	LC50	Bluegill (Lepomis macrochirus)	7.711 - 9.591 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.		
<b>Mobility in soil</b>	No data available.		
<b>Mobility in general</b>	Not available.		
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

### 13. Disposal Considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. 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>	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 (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport Information

<b>Transport of Dangerous Goods (TDG) Proof of Classification</b>	In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue.
<b>U.S. Department of Transportation (DOT)</b>	
<b>Basic shipping requirements:</b>	
<b>UN number</b>	UN3475
<b>Proper shipping name</b>	ETHANOL AND GASOLINE MIXTURE, with more than 10 per cent ethanol
<b>Hazard class</b>	3
<b>Packing group</b>	II
<b>Special provisions</b>	144, 177, IB2, T4, TP1
<b>Packaging exceptions</b>	150
<b>Transportation of Dangerous Goods (TDG - Canada)</b>	
<b>Basic shipping requirements:</b>	
<b>UN number</b>	UN3475
<b>Proper shipping name</b>	ETHANOL AND GASOLINE MIXTURE, with more than 10 per cent ethanol

Hazard class 3  
Packing group II  
Special provisions 150

DOT



TDG



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## 15. Regulatory Information

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**Canadian federal regulations** This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (SOR/2015-17) and the SDS contains all the information required by the HPR.

**Canada CEPA Schedule I: Listed substance**

Benzene (CAS 71-43-2) Listed.

**Canada DSL Challenge Substances: Listed substance**

Hexane (CAS 110-54-3) Listed.

**Canada NPRI VOCs with Additional Reporting Requirements: Mass reporting threshold/Identification Number**

Benzene (CAS 71-43-2)	1 TONNES
Ethanol (CAS 64-17-5)	1 TONNES
Hexane (CAS 110-54-3)	1 TONNES
Toluene (CAS 108-88-3)	1 TONNES
Xylene (CAS 1330-20-7)	1 TONNES

**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Toluene (CAS 108-88-3) Class B

**WHMIS 2015 Exemptions** Controlled

**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)**

Benzene (CAS 71-43-2)	Listed.
Gasoline (CAS 8006-61-9)	Listed.
Hexane (CAS 110-54-3)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene (CAS 1330-20-7)	Listed.

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

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

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - Yes  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

<b>Chemical name</b>	<b>CAS number</b>	<b>% by wt.</b>
Xylene	1330-20-7	2 - 5
Toluene	108-88-3	0.5 - 1.5
Benzene	71-43-2	0.1 - 1

**Other federal regulations**

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

Benzene (CAS 71-43-2)  
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)**

Not regulated.

**Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)** Hazardous substance  
Priority pollutant  
Toxic pollutant

**US state regulations** See below

**US - California Hazardous Substances (Director's): Listed substance**

Benzene (CAS 71-43-2) Listed.  
Ethanol (CAS 64-17-5) Listed.  
Gasoline (CAS 8006-61-9) Listed.  
Hexane (CAS 110-54-3) Listed.  
Toluene (CAS 108-88-3) Listed.  
Xylene (CAS 1330-20-7) Listed.

**US - Illinois Chemical Safety Act: Listed substance**

Benzene (CAS 71-43-2)  
Ethanol (CAS 64-17-5)  
Gasoline (CAS 8006-61-9)  
Hexane (CAS 110-54-3)  
Toluene (CAS 108-88-3)  
Xylene (CAS 1330-20-7)

**US - Louisiana Spill Reporting: Listed substance**

Benzene (CAS 71-43-2) Listed.  
Ethanol (CAS 64-17-5) Listed.  
Gasoline (CAS 8006-61-9) Listed.  
Hexane (CAS 110-54-3) Listed.  
Toluene (CAS 108-88-3) Listed.  
Xylene (CAS 1330-20-7) Listed.

**US - Michigan Critical Materials Register: Parameter number**

Benzene (CAS 71-43-2) BENZENE  
Toluene (CAS 108-88-3) TOLUENE  
Xylene (CAS 1330-20-7) XYLENE (ALL ISOMERS)

**US - Minnesota Haz Subs: Listed substance**

Benzene (CAS 71-43-2) Listed.  
Ethanol (CAS 64-17-5) Listed.  
Gasoline (CAS 8006-61-9) Listed.  
Hexane (CAS 110-54-3) Listed.  
Toluene (CAS 108-88-3) Listed.  
Xylene (CAS 1330-20-7) Listed.

**US - New Jersey RTK - Substances: Listed substance**

Benzene (CAS 71-43-2)  
Ethanol (CAS 64-17-5)  
Gasoline (CAS 8006-61-9)  
Hexane (CAS 110-54-3)  
Toluene (CAS 108-88-3)

Xylene (CAS 1330-20-7)

**US - North Carolina Toxic Air Pollutants: Listed substance**

Benzene (CAS 71-43-2)

Hexane (CAS 110-54-3)

Toluene (CAS 108-88-3)

Xylene (CAS 1330-20-7)

**US - Pennsylvania RTK - Hazardous Substances: Special hazard**

Benzene (CAS 71-43-2)

**US - Texas Effects Screening Levels: Listed substance**

Benzene (CAS 71-43-2) Listed.

Ethanol (CAS 64-17-5) Listed.

Gasoline (CAS 8006-61-9) Listed.

Hexane (CAS 110-54-3) Listed.

Toluene (CAS 108-88-3) Listed.

Xylene (CAS 1330-20-7) Listed.

**US - Washington Chemical of High Concern to Children: Listed substance**

Benzene (CAS 71-43-2)

Toluene (CAS 108-88-3)

**US. Massachusetts RTK - Substance List**

Benzene (CAS 71-43-2)

Ethanol (CAS 64-17-5)

Gasoline (CAS 8006-61-9)

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)

Gasoline (CAS 8006-61-9)

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)

Ethanol (CAS 64-17-5)

Hexane (CAS 110-54-3)

Toluene (CAS 108-88-3)

Xylene (CAS 1330-20-7)

**US. Rhode Island RTK**

Benzene (CAS 71-43-2)

Hexane (CAS 110-54-3)

Toluene (CAS 108-88-3)

Xylene (CAS 1330-20-7)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Benzene (CAS 71-43-2) Listed: February 27, 1987

Ethanol (CAS 64-17-5) Listed: April 29, 2011

Listed: July 1, 1988

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

Benzene (CAS 71-43-2) Listed: December 26, 1997

Ethanol (CAS 64-17-5) Listed: October 1, 1987

Toluene (CAS 108-88-3) Listed: January 1, 1991

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

Benzene (CAS 71-43-2) Listed: December 26, 1997

**Inventory status**

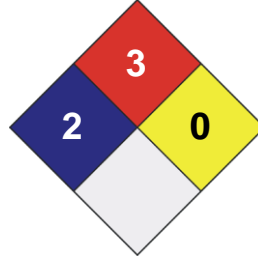
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL HAZARD		0
PERSONAL PROTECTION		X



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01

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**Prepared by**

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**Other information**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (SOR/2015-17) and the SDS contains all the information required by the HPR. For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.