



SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	CBOB Gasoline (With ethanol)
Other means of identification	Not available
Recommended use	Fuel
Recommended restrictions	None known.
Manufacturer information	Irving Oil Refining G.P. Box 1260 Saint John, NB E2L 4H6 CA Phone: (506) 202-2000 Refinery: (506) 202-3000 Emergency Phone: 1-800-424-9300 (CHEMTREC)
Supplier	See above.

2. Hazards Identification

Physical hazards	Flammable liquids	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2B
	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 2
	Aspiration hazard	Category 1
Environmental hazards	Not classified.	
WHMIS 2015 defined hazards	Not classified	
Label elements		



Signal word

Danger

Hazard statement

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

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.

Response	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). 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. Call a POISON CENTER if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. IF exposed or concerned: Get medical advice/attention.
Storage	Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	Not applicable.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Gasoline		8006-61-9	60-100
Ethanol		64-17-5	7-13
Toluene		108-88-3	5-10
Xylene		1330-20-7	5-10
Hexane		110-54-3	1-5
Benzene		71-43-2	0.1-1

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

Composition comments	*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

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

General information

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance. Wear rubber gloves and chemical goggles with face shield. Wash contaminated clothing before reuse. Keep away from sources of ignition. No smoking. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Carbon dioxide. Dry chemical. Foam.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Container may explode in heat of fire. Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self-contained breathing apparatus.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Extremely flammable liquid and vapor.
Hazardous combustion products	May include and are not limited to: Oxides of nitrogen. Oxides of carbon. Aromatic and aliphatic hydrocarbons

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not breathe mist or vapor. 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.
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. Use only non-sparking tools. 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.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

Precautions for safe handling	<p>Obtain special instructions before use.</p> <p>Do not handle until all safety precautions have been read and understood.</p> <p>Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight.</p> <p>Vapors may form explosive mixtures with air.</p> <p>Avoid contact with eyes, skin and clothing.</p> <p>Wear appropriate personal protective equipment.</p> <p>Avoid breathing vapors or mists of this product.</p> <p>Use only with adequate ventilation.</p> <p>Avoid contact during pregnancy/while nursing.</p> <p>Avoid prolonged exposure.</p> <p>Observe good industrial hygiene practices.</p> <p>Wash thoroughly after handling.</p> <p>When using, do not eat, drink or smoke.</p>
Conditions for safe storage, including any incompatibilities	<p>Store locked up.</p> <p>Store in a well-ventilated place.</p> <p>Store away from incompatible materials (see Section 10 of the SDS).</p> <p>Keep away from heat, open flames or other sources of ignition.</p> <p>Keep out of reach of children.</p>

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

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

Components	Type	Value
		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	3 mg/m3 1 ppm
Ethanol (CAS 64-17-5)	TWA	1880 mg/m3 1000 ppm
Gasoline (CAS 8006-61-9)	STEL	1480 mg/m3 500 ppm

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

Components	Type	Value
	TWA	890 mg/m3 300 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

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

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

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

Components	Type	Value
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)

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

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

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
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
Xylene (CAS 1330-20-7)	STEL	655 mg/m3 150 ppm
	TWA	435 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 Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Tychem™. Gloves.

Other 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. As required by employer code.

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, drink or smoke.

9. Physical and Chemical Properties

Appearance Clear

Physical state	Liquid.
Form	Liquid
Color	Clear
Odor	Characteristic Gasoline
Odor threshold	Not available.
pH	Not applicable
Melting point/freezing point	<= -112 °F (<= -80 °C)
Initial boiling point and boiling range	80.6 - 428 °F (27 - 220 °C)
Pour point	Not available.
Specific gravity	0.73 - 0.75 @ 15°C
Partition coefficient (n-octanol/water)	Not available
Flash point	-45.4 °F (-43.0 °C) Closed Cup (Typical)
Evaporation rate	4 (butyl acetate = 1)
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	> 1.4 (Typical)
Flammability limit - upper (%)	< 7.6 (Typical)
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	150 - 500 mmHg @ 20°C
Vapor density	2.5 - 4 (air = 1)
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	494.6 °F (257 °C) (Typical)
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	May react with incompatible materials.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Avoid temperatures exceeding the flash point. Do not mix with other chemicals. Heat, open flames, static discharge, sparks and other ignition sources.
Incompatible materials	Strong acids. Strong oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Aromatic hydrocarbons.

11. Toxicological Information

Routes of exposure	Eye, Skin contact, Skin absorption, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	May be fatal if swallowed and enters airways.
Inhalation	Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May cause damage to organs by inhalation.
Skin contact	Causes skin irritation.
Eye contact	Causes eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Skin irritation. May cause redness and pain. Exposed individuals may experience eye tearing, redness and discomfort. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Information on toxicological effects	
Acute toxicity	Narcotic effects. May be fatal if swallowed and enters airways.

Components	Species	Test Results
Benzene (CAS 71-43-2)		
Acute		
<i>Dermal</i>		
LD50	Guinea pig	> 8260 mg/kg, HSDB
	Guinea pig; Rabbit	> 9.4 ml/kg, 24 Hours, ECHA
<i>Inhalation</i>		
LC50	Mouse	9980 ppm, 7 Hours, ECHA
	Rat	43767 mg/m3, 4 Hours, ECHA
		13700 ppm, 4 Hours, ECHA
		10000 ppm, 7 Hours, HSDB
		31.8 mg/l/4h, HSDB
<i>Oral</i>		
LD50	Mouse	4700 mg/kg, HSDB
	Rat	> 2000 mg/kg, ECHA
		5970 mg/kg, ECHA
		4700 mg/kg, HSDB
		3306 mg/kg, HSDB
Ethanol (CAS 64-17-5)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 15800 mg/kg, SIDS initial assessment report
<i>Inhalation</i>		
LC50	Cat	85.4 mg/L, 4.5 Hours, ECHA
		43.7 mg/L, 6 Hours, ECHA
	Mouse	> 60000 ppm, 60 Minutes, ECHA
		79.4 mg/L, 134 Minutes, ECHA
	Rat	> 115.9 mg/L, 4 Hours, ECHA
		31623 ppm, 4 Hours, HMIRA
		20000 ppm, 10 Hours, HSDB
		51.3 mg/L, 6 Hours, ECHA
<i>Oral</i>		
LD50	Dog	5.5 g/kg, HSDB
	Guinea pig	5600 mg/kg, HSDB
	Monkey	6000 mg/kg
	Mouse	10500 ml/kg, ECHA
		3450 mg/kg, SAX
	Pig	> 5000 mg/kg, ECHA
	Rat	1187 - 2769 mg/kg, ECHA
		12400 mg/kg, ECHA
		10470 mg/kg, ECHA
		7800 ml/kg, ECHA
Gasoline (CAS 8006-61-9)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 1900 mg/kg, 24 Hours
		3750 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 4980 mg/m3, 4 Hours
		> 5 mg/L, 4 Hours
		5.2 mg/l/4h

Components	Species	Test Results
<i>Oral</i> LD50	Rat	13600 mg/kg 4820 mg/kg
Hexane (CAS 110-54-3) Acute <i>Dermal</i> LD50	Rabbit	> 2000 mg/kg, 4 Hours, ECHA > 5 ml/kg, 4 Hours, ECHA
<i>Inhalation</i> LC50	Mouse Rat	48000 ppm, 4 Hours, HSDB > 5000 ppm, 24 Hours, ECHA > 31.9 mg/L, 4 Hours, ECHA 73860 ppm, 4 Hours, ECHA 38500 mg/l/4h, HMIRA
<i>Oral</i> LD50	Rat	28710 mg/kg, RTECS 49 ml/kg, ECHA 43.5 ml/kg, ECHA 24 ml/kg, ECHA
Toluene (CAS 108-88-3) Acute <i>Dermal</i> LD50	Rabbit	> 5000 mg/kg, 24 Hours, ECHA 12124 mg/kg, HSDB 14.1 ml/kg, HSDB
<i>Inhalation</i> LC50	Mouse Rat	6405 - 7436 ppm, 6 Hours, ECHA 5320 ppm, 8 Hours, ECHA/HSDB 400 ppm, 24 Hours, HSDB 26700 ppm, 1 Hours, HSDB 12200 ppm, 2 Hours, HSDB 8000 ppm, 4 Hours, HSDB 5879 - 6281 ppm, 6 Hours, ECHA 30 mg/L, 4 Hours, ECHA 28.1 mg/L, 4 Hours, ECHA 25.7 mg/L, 4 Hours, ECHA
<i>Oral</i> LD50	Rat	> 5000 mg/kg, ECHA 5580 mg/kg, ECHA 2.6 g/kg, HSDB
Xylene (CAS 1330-20-7) Acute <i>Dermal</i> LD50	Rabbit	> 5000 ml/kg, 4 Hours, ECHA > 43 g/kg, HSDB 12126 mg/kg, 24 Hours, ECHA
<i>Inhalation</i> LC50	Mouse Rat	3907 ppm, 6 Hours, HSDB 3907 mg/L, 6 Hours, HSDB 6700 ppm, 4 Hours, ECHA 6580 ppm, 4 Hours, ECHA

Components	Species	Test Results
		6350 ppm, 4 Hours, ECHA/HSDB
		6247 ppm, 4 Hours, ECHA
		5922 ppm, 4 Hours, ECHA
<i>Oral</i>		
LD50	Mouse	5627 mg/kg, ECHA/HSDB
		5251 mg/kg, ECHA
	Rat	> 4000 mg/kg, ECHA
		6670 mg/kg, HSDB
		4300 mg/kg, ECHA/HSDB
		3523 mg/kg
		10 ml/kg, ECHA
Skin corrosion/irritation	Causes skin irritation.	
Exposure minutes	Not available.	
Erythema value	Not available.	
Oedema value	Not available.	
Serious eye damage/eye irritation	Causes eye irritation.	
Corneal opacity value	Not available.	
Iris lesion value	Not available.	
Conjunctival reddening value	Not available.	
Conjunctival oedema value	Not available.	
Recover days	Not available.	
Respiratory or skin sensitization		
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Mutagenicity	May cause genetic defects. 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.	
Carcinogenicity	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. See below.	
ACGIH Carcinogens		
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.
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

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

Teratogenicity

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

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.

Specific target organ toxicity - single exposure

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 inhalation may be harmful. Prolonged or repeated overexposure can cause liver and kidney damage.

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

12. Ecological Information

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

Aquatic

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

Ethanol (CAS 64-17-5)

Crustacea

EC50

Daphnia

11744.5 mg/L, 48 Hours

Aquatic

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)

Aquatic

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

Aquatic

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)

Aquatic

Fish

LC50

Bluegill (Lepomis macrochirus)

7.711 - 9.591 mg/L, 96 hours

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Mobility in general

Not available.

Other adverse effects

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

Disposal instructions	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	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	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).
Contaminated packaging	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

Transport of Dangerous Goods (TDG) Proof of Classification Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number	UN1203
Proper shipping name	Gasoline
Hazard class	3
Packing group	II
Special provisions	144, 177, B1, B33, IB2, T4
Packaging exceptions	150

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number	UN1203
Proper shipping name	GASOLINE
Hazard class	3
Packing group	II
Special provisions	17, 88, 91, 98, 150

DOT



TDG



15. Regulatory Information

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
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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
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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)

Chemical name	CAS number	% by wt.
Toluene	108-88-3	5-10
Xylene	1330-20-7	5-10
Hexane	110-54-3	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)
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. 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
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Inventory status

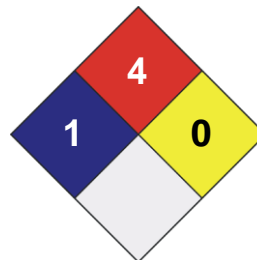
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*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	* 1
FLAMMABILITY	4
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



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02

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Prepared by

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Other information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.