



# SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Product identifier</b>	<b>Alkylate</b>
<b>Other means of identification</b>	Not available
<b>Recommended use</b>	Blending component
<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 Emergency Phone: 1-800-424-9300 (CHEMTREC)
<b>Supplier</b>	See above.

## 2. Hazards Identification

<b>Physical hazards</b>	Gases under pressure	Liquefied gas
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>WHMIS 2015 defined hazards</b>	Not classified	
<b>Label elements</b>		



<b>Signal word</b>	Danger
<b>Hazard statement</b>	Extremely flammable liquid and vapor. Causes skin irritation. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.
<b>Precautionary statement</b>	
<b>Prevention</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid breathing 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. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Specific treatment (see information on this label). IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.
<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>	None.

### 3. Composition/Information on Ingredients

#### Mixture

#### Hazardous components

Chemical name	Common name and synonyms	CAS number	%
Isooctane		540-84-1	10 - 30
Pentane, 2,3,3-trimethyl-		560-21-4	10 - 30
Pentane, 2,3,4-trimethyl-		565-75-3	10 - 30
Butane, 2-methyl-		78-78-4	7 - 13
2,3-Dimethylbutane		79-29-8	1 - 5
2,3-Dimethylhexane		584-94-1	1 - 5
2,4-Dimethylhexane		589-43-5	1 - 5
2,4-Dimethylpentane		108-08-7	1 - 5
2-Methyl-1-butene (technical)		563-46-2	1 - 5
Hexane, 2,2,5-trimethyl-		3522-94-9	1 - 5
Isohexane		107-83-5	1 - 5
Pentane, 2,2,3-trimethyl-		564-02-3	1 - 5
2,2,3-trimethylbutane		464-06-2	0.1 - 1
2,2,4-Trimethylhexane		16747-26-5	0.1 - 1
3,3,4-trimethylhexane		16747-31-2	0.1 - 1
3-Methylhexane		589-34-4	0.1 - 1
4-Methylheptane		589-53-7	0.1 - 1
Benzene, 1,2-dimethyl-		95-47-6	0.1 - 1
Butyl benzene		104-51-8	0.1 - 1
Nonane		111-84-2	0.1 - 1
p-Diethyl benzene		105-05-5	0.1 - 1
Pentane, 3-methyl-		96-14-0	0.1 - 1

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

### 4. First Aid Measures

<b>Inhalation</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician 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. Take off contaminated clothing and wash it before reuse. Specific treatment (see information on this label).
<b>Eye contact</b>	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
<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>	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain.
<b>Indication of immediate medical attention and special treatment needed</b>	Symptoms may be delayed.
<b>General information</b>	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. 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>	Water fog. Foam. Dry chemical powder. Carbon dioxide.
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<b>Unsuitable extinguishing media</b>	Not available.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed. 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.
<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>	Extremely flammable liquid and vapor.
<b>Hazardous combustion products</b>	May include and are not limited to: Aromatic hydrocarbons. Oxides of carbon.

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## 6. Accidental Release Measures

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<b>Personal precautions, protective equipment and emergency procedures</b>	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. Avoid breathing 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.
<b>Methods and materials for containment and cleaning up</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). 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 in 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.

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## 7. Handling and Storage

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<b>Precautions for safe handling</b>	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Avoid contact with eyes, skin, and clothing. Wear appropriate personal protective equipment. Avoid breathing mist or vapor. Use only with adequate ventilation. Avoid prolonged exposure. Observe good industrial hygiene practices. Wash thoroughly after handling. When handling, do not eat, drink or smoke.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Keep away from heat, sparks and open flame. Store in a cool, dry, well-ventilated place. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

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## 8. Exposure Controls/Personal Protection

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### Occupational exposure limits

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

Components	Type	Value
2,2,3-trimethylbutane (CAS 464-06-2)	STEL	2050 mg/m3
		500 ppm
	TWA	1640 mg/m3
		400 ppm
2,2,4-Trimethylhexane (CAS 16747-26-5)	TWA	1050 mg/m3
		200 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	3500 mg/m3
		1000 ppm
	TWA	1760 mg/m3
		500 ppm

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
2,3-Dimethylhexane (CAS 584-94-1)	TWA	1400 mg/m <sup>3</sup>
		300 ppm
2,4-Dimethylhexane (CAS 589-43-5)	TWA	1400 mg/m <sup>3</sup>
		300 ppm
2,4-Dimethylpentane (CAS 108-08-7)	STEL	2050 mg/m <sup>3</sup>
		500 ppm
	TWA	1640 mg/m <sup>3</sup>
		400 ppm
3,3,4-trimethylhexane (CAS 16747-31-2)	TWA	1050 mg/m <sup>3</sup>
		200 ppm
3-Methylhexane (CAS 589-34-4)	STEL	2050 mg/m <sup>3</sup>
		500 ppm
	TWA	1640 mg/m <sup>3</sup>
		400 ppm
4-Methylheptane (CAS 589-53-7)	TWA	1400 mg/m <sup>3</sup>
		300 ppm
Benzene, 1,2-dimethyl- (CAS 95-47-6)	STEL	651 mg/m <sup>3</sup>
		150 ppm
	TWA	434 mg/m <sup>3</sup>
		100 ppm
Butane, 2-methyl- (CAS 78-78-4)	TWA	1770 mg/m <sup>3</sup>
		600 ppm
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)	TWA	1050 mg/m <sup>3</sup>
		200 ppm
Isohexane (CAS 107-83-5)	STEL	3500 mg/m <sup>3</sup>
		1000 ppm
	TWA	1760 mg/m <sup>3</sup>
		500 ppm
Isooctane (CAS 540-84-1)	TWA	1400 mg/m <sup>3</sup>
		300 ppm
Nonane (CAS 111-84-2)	TWA	1050 mg/m <sup>3</sup>
		200 ppm
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)	TWA	1400 mg/m <sup>3</sup>
		300 ppm
Pentane, 2,3,3-trimethyl- (CAS 560-21-4)	TWA	1400 mg/m <sup>3</sup>
		300 ppm
Pentane, 2,3,4-trimethyl- (CAS 565-75-3)	TWA	1400 mg/m <sup>3</sup>
		300 ppm
Pentane, 3-methyl- (CAS 96-14-0)	STEL	3500 mg/m <sup>3</sup>
		1000 ppm
	TWA	1760 mg/m <sup>3</sup>
		500 ppm

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
2,2,3-trimethylbutane (CAS 464-06-2)	STEL	500 ppm
	TWA	400 ppm
2,3-Dimethylbutane (CAS 79-29-8)	TWA	200 ppm
2,4-Dimethylpentane (CAS 108-08-7)	STEL	500 ppm
	TWA	400 ppm
3-Methylhexane (CAS 589-34-4)	STEL	500 ppm
	TWA	400 ppm
Benzene, 1,2-dimethyl- (CAS 95-47-6)	STEL	150 ppm
	TWA	100 ppm
Butane, 2-methyl- (CAS 78-78-4)	TWA	600 ppm
Isohexane (CAS 107-83-5)	TWA	200 ppm
Isooctane (CAS 540-84-1)	TWA	300 ppm
Nonane (CAS 111-84-2)	TWA	200 ppm
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)	TWA	300 ppm
Pentane, 3-methyl- (CAS 96-14-0)	TWA	200 ppm

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
2,2,3-trimethylbutane (CAS 464-06-2)	STEL	500 ppm
	TWA	400 ppm
2,2,4-Trimethylhexane (CAS 16747-26-5)	TWA	200 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	1000 ppm
	TWA	500 ppm
2,4-Dimethylpentane (CAS 108-08-7)	STEL	500 ppm
	TWA	400 ppm
3,3,4-trimethylhexane (CAS 16747-31-2)	TWA	200 ppm
3-Methylhexane (CAS 589-34-4)	STEL	500 ppm
	TWA	400 ppm
Benzene, 1,2-dimethyl- (CAS 95-47-6)	STEL	150 ppm
	TWA	100 ppm
Butane, 2-methyl- (CAS 78-78-4)	TWA	1000 ppm
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)	TWA	200 ppm
Isohexane (CAS 107-83-5)	STEL	1000 ppm
	TWA	500 ppm
Nonane (CAS 111-84-2)	TWA	200 ppm
Pentane, 3-methyl- (CAS 96-14-0)	STEL	1000 ppm
	TWA	500 ppm

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
2,2,3-trimethylbutane (CAS 464-06-2)	STEL	500 ppm
	TWA	400 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	1000 ppm
	TWA	500 ppm
2,4-Dimethylpentane (CAS 108-08-7)	STEL	500 ppm
	TWA	400 ppm
3-Methylhexane (CAS 589-34-4)	STEL	500 ppm
	TWA	400 ppm
Benzene, 1,2-dimethyl- (CAS 95-47-6)	STEL	150 ppm
	TWA	100 ppm
Butane, 2-methyl- (CAS 78-78-4)	TWA	600 ppm
	STEL	1000 ppm
Isohexane (CAS 107-83-5)	TWA	500 ppm
	TWA	300 ppm
Isooctane (CAS 540-84-1)	TWA	300 ppm
	TWA	200 ppm
Nonane (CAS 111-84-2)	TWA	300 ppm
	TWA	300 ppm
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)	TWA	300 ppm
	STEL	1000 ppm
Pentane, 3-methyl- (CAS 96-14-0)	TWA	500 ppm

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
2,2,4-Trimethylhexane (CAS 16747-26-5)	TWA	1050 mg/m3
		200 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	3500 mg/m3
	TWA	1000 ppm
2,3-Dimethylhexane (CAS 584-94-1)	TWA	1760 mg/m3
		500 ppm
2,3-Dimethylhexane (CAS 584-94-1)	STEL	1750 mg/m3
	TWA	375 ppm
2,4-Dimethylhexane (CAS 589-43-5)	TWA	1400 mg/m3
		300 ppm
2,4-Dimethylhexane (CAS 589-43-5)	STEL	1750 mg/m3
	TWA	375 ppm
3,3,4-trimethylhexane (CAS 16747-31-2)	TWA	1400 mg/m3
		300 ppm
3,3,4-trimethylhexane (CAS 16747-31-2)	TWA	1050 mg/m3
		200 ppm
4-Methylheptane (CAS 589-53-7)	STEL	1750 mg/m3
	TWA	375 ppm
4-Methylheptane (CAS 589-53-7)	TWA	1400 mg/m3
		300 ppm
Benzene, 1,2-dimethyl- (CAS 95-47-6)	STEL	651 mg/m3
		150 ppm

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
	TWA	434 mg/m3 100 ppm
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)	TWA	1050 mg/m3 200 ppm
Isohexane (CAS 107-83-5)	STEL	3500 mg/m3 1000 ppm
	TWA	1760 mg/m3 500 ppm
Isooctane (CAS 540-84-1)	STEL	1750 mg/m3 375 ppm
	TWA	1400 mg/m3 300 ppm
Nonane (CAS 111-84-2)	TWA	1050 mg/m3 200 ppm
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)	STEL	1750 mg/m3 375 ppm
	TWA	1400 mg/m3 300 ppm
Pentane, 2,3,3-trimethyl- (CAS 560-21-4)	STEL	1750 mg/m3 375 ppm
	TWA	1400 mg/m3 300 ppm
Pentane, 2,3,4-trimethyl- (CAS 565-75-3)	STEL	1750 mg/m3 375 ppm
	TWA	1400 mg/m3 300 ppm
Pentane, 3-methyl- (CAS 96-14-0)	STEL	3500 mg/m3 1000 ppm
	TWA	1760 mg/m3 500 ppm

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
2,3-Dimethylhexane (CAS 584-94-1)	PEL	2350 mg/m3 500 ppm
2,4-Dimethylhexane (CAS 589-43-5)	PEL	2350 mg/m3 500 ppm
4-Methylheptane (CAS 589-53-7)	PEL	2350 mg/m3 500 ppm
Benzene, 1,2-dimethyl- (CAS 95-47-6)	PEL	435 mg/m3 100 ppm
Isooctane (CAS 540-84-1)	PEL	2350 mg/m3 500 ppm
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)	PEL	2350 mg/m3 500 ppm
Pentane, 2,3,3-trimethyl- (CAS 560-21-4)	PEL	2350 mg/m3 500 ppm
Pentane, 2,3,4-trimethyl- (CAS 565-75-3)	PEL	2350 mg/m3

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
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500 ppm

**US. ACGIH Threshold Limit Values**

<b>Components</b>	<b>Type</b>	<b>Value</b>
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2,2,3-trimethylbutane (CAS 464-06-2)	STEL	500 ppm
	TWA	400 ppm
2,2,4-Trimethylhexane (CAS 16747-26-5)	TWA	200 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	1000 ppm
	TWA	500 ppm
2,4-Dimethylpentane (CAS 108-08-7)	STEL	500 ppm
	TWA	400 ppm
3,3,4-trimethylhexane (CAS 16747-31-2)	TWA	200 ppm
3-Methylhexane (CAS 589-34-4)	STEL	500 ppm
	TWA	400 ppm
Benzene, 1,2-dimethyl- (CAS 95-47-6)	STEL	150 ppm
	TWA	100 ppm
Butane, 2-methyl- (CAS 78-78-4)	TWA	1000 ppm
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)	TWA	200 ppm
Isohexane (CAS 107-83-5)	STEL	1000 ppm
	TWA	500 ppm
Nonane (CAS 111-84-2)	TWA	200 ppm
Pentane, 3-methyl- (CAS 96-14-0)	STEL	1000 ppm
	TWA	500 ppm

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
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2,2,4-Trimethylhexane (CAS 16747-26-5)	TWA	1050 mg/m3
		200 ppm
2,3-Dimethylbutane (CAS 79-29-8)	Ceiling	1800 mg/m3
		510 ppm
	TWA	350 mg/m3
		100 ppm
2,3-Dimethylhexane (CAS 584-94-1)	Ceiling	1800 mg/m3
		385 ppm
	TWA	350 mg/m3
		75 ppm
2,4-Dimethylhexane (CAS 589-43-5)	Ceiling	1800 mg/m3
		385 ppm
	TWA	350 mg/m3
		75 ppm
3,3,4-trimethylhexane (CAS 16747-31-2)	TWA	1050 mg/m3
		200 ppm
4-Methylheptane (CAS 589-53-7)	Ceiling	1800 mg/m3



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

<b>Components</b>	<b>Type</b>	<b>Value</b>
		385 ppm
	TWA	350 mg/m3 75 ppm
Benzene, 1,2-dimethyl- (CAS 95-47-6)	STEL	655 mg/m3
		150 ppm
	TWA	435 mg/m3 100 ppm
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)	TWA	1050 mg/m3
		200 ppm
Isohexane (CAS 107-83-5)	Ceiling	1800 mg/m3 510 ppm
	TWA	350 mg/m3 100 ppm
Isooctane (CAS 540-84-1)	Ceiling	1800 mg/m3 385 ppm
	TWA	350 mg/m3 75 ppm
Nonane (CAS 111-84-2)	TWA	1050 mg/m3 200 ppm
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)	Ceiling	1800 mg/m3
		385 ppm
	TWA	350 mg/m3 75 ppm
Pentane, 2,3,3-trimethyl- (CAS 560-21-4)	Ceiling	1800 mg/m3
		385 ppm
	TWA	350 mg/m3 75 ppm
Pentane, 2,3,4-trimethyl- (CAS 565-75-3)	Ceiling	1800 mg/m3
		385 ppm
	TWA	350 mg/m3 75 ppm
Pentane, 3-methyl- (CAS 96-14-0)	Ceiling	1800 mg/m3
		510 ppm
	TWA	350 mg/m3 100 ppm

**US. AIHA Workplace Environmental Exposure Level (WEEL) Guides**

<b>Components</b>	<b>Type</b>	<b>Value</b>
p-Diethyl benzene (CAS 105-05-5)	TWA	5 ppm

**Biological limit values**

**ACGIH Biological Exposure Indices**

<b>Components</b>	<b>Value</b>	<b>Determinant</b>	<b>Specimen</b>	<b>Sampling Time</b>
Benzene, 1,2-dimethyl- (CAS 95-47-6)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

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

**Appropriate engineering controls** Ensure adequate ventilation.

**Individual protection measures, such as personal protective equipment**

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

<b>Skin protection</b>	
<b>Hand protection</b>	Impervious gloves. Confirm with reputable supplier first.
<b>Other</b>	Coveralls to prevent skin contact. If clothing or footwear becomes contaminated with the product, remove it and completely decontaminate it before re-use, or discard it.
<b>Respiratory protection</b>	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).
<b>Thermal hazards</b>	Not applicable.
<b>General hygiene considerations</b>	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. When using, do not eat, drink or smoke.

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## 9. Physical and Chemical Properties

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<b>Appearance</b>	Liquid
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid or Vapor
<b>Color</b>	Clear
<b>Odor</b>	Petroleum
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not applicable
<b>Melting point/freezing point</b>	<= -58 °F (<= -50 °C)
<b>Initial boiling point and boiling range</b>	86 - 392 °F (30 - 200 °C)
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	~0.8
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Flash point</b>	-49.0 °F (-45.0 °C) Closed Cup
<b>Evaporation rate</b>	~ 4 (BuAc=1)
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	> 1.4 %
<b>Flammability limit - upper (%)</b>	< 7.6 %
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	20 - 70 kPa @37.8°C
<b>Vapor density</b>	3 - 4 @ 20°C
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Insoluble
<b>Auto-ignition temperature</b>	852.8 °F (456 °C)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

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## 10. Stability and Reactivity

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<b>Reactivity</b>	May react with incompatible materials.
<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 heat, sparks, open flames and other ignition sources. Do not mix with other chemicals.
<b>Incompatible materials</b>	Acids. Strong oxidizing agents.

**Hazardous decomposition products**

May include and are not limited to: Aromatic hydrocarbons. Oxides of carbon.

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**11. Toxicological Information**

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**Routes of exposure** Inhalation. Ingestion. Skin contact. Eye contact. Eye, Skin contact, Skin absorption, Inhalation, Ingestion. Eye, Skin contact, Inhalation, Ingestion.**Information on likely routes of exposure****Ingestion** Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. May cause stomach distress, nausea or vomiting.**Inhalation** May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.**Skin contact** Causes skin irritation.**Eye contact** Direct contact with eyes may cause temporary irritation.**Symptoms related to the physical, chemical and toxicological characteristics** Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting.

Skin irritation. May cause redness and pain.

**Information on toxicological effects****Acute toxicity** May be fatal if swallowed and enters airways. Narcotic effects.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
1,1,2-Trimethylcyclohexane (CAS 7094-26-0)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Not available	
2,2,3-trimethylbutane (CAS 464-06-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Not available	
	Rat	> 33.5 mg/L, 4 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	> 5000 mg/kg
2,2,4-Trimethylhexane (CAS 16747-26-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	3200 mg/L, 4 Hours 3200 ppm, 4 Hours 23.8 mg/L, 8 Hours 17 mg/L, 4 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	> 5000 mg/kg
2,3-Dimethylbutane (CAS 79-29-8)		
<b>Acute</b>		
<i>Dermal</i>		
LC50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Not available	

Components	Species	Test Results
2,3-Dimethylhexane (CAS 584-94-1)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 24.9 mg/L, 4 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	> 5000 mg/kg
2,4-Dimethylhexane (CAS 589-43-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 24.9 mg/L, 4 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	> 5000 mg/kg
2,4-Dimethylpentane (CAS 108-08-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours, ECHA
<i>Inhalation</i>		
LC50	Rat	> 33.5 mg/L, 4 Hours, ECHA
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, ECHA
2-Methyl-1-butene (technical) (CAS 563-46-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
	Rat	> 3 ml/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 6 %, 4 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	1 - 4 ml/kg
3,3,4-trimethylhexane (CAS 16747-31-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	3200 ppm, 4 Hours 23.8 mg/L, 8 Hours 17 mg/L, 4 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	> 5000 mg/kg
3-Methylhexane (CAS 589-34-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours, ECHA

Components	Species	Test Results
<i>Inhalation</i>		
LC50	Rat	> 33.5 mg/L, 4 Hours, ECHA
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, ECHA
4-Methylheptane (CAS 589-53-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 24.9 mg/L, 4 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	> 5000 mg/kg
Benzene, 1,2-dimethyl- (CAS 95-47-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 ml/kg, 4 Hours, ECHA > 43 g/kg
<i>Inhalation</i>		
LC50	Mouse	4595 ppm, 6 Hours, ECHA
	Rat	6700 ppm, 4 Hours, ECHA/HSDB 6350 ppm, 4 Hours, ECHA/HSDB 4330 ppm, 6 Hours, ECHA
<i>Oral</i>		
LD50	Mouse	5627 mg/kg, ECHA 5251 mg/kg, ECHA 1590 mg/kg, HSDB
	Rat	> 4000 mg/kg, ECHA 4300 mg/kg, ECHA/HSDB 3608 mg/kg, HSDB 3523 mg/kg, ECHA 10 ml/kg, ECHA
Butane, 2-methyl- (CAS 78-78-4)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Mouse	14000 ppm 1000 mg/L, 1 Hours 450 mg/L, 2 Hours
	Rat	> 25.3 mg/L, 4 Hours
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg
<b>LD50</b>		
<i>Oral</i>		
LD50	Not available	
Butyl benzene (CAS 104-51-8)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Not available	

Components	Species	Test Results
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	3200 ppm, 4 Hours 3200 mg/L, 4 Hours 23.8 mg/L, 8 Hours 17 mg/L, 4 Hours
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
<b>LD50</b>		
Not available.		
Isohexane (CAS 107-83-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5 ml/kg, 4 Hours, ECHA
<i>Inhalation</i>		
LC50	Rat	73860 ppm, 4 Hours, ECHA
<i>Oral</i>		
LD50	Rat	> 25 ml/kg, ECHA
Isooctane (CAS 540-84-1)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 33.5 mg/L, 4 Hours
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
Isopropylcyclohexane (CAS 696-29-7)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Not available	
	Rat	> 5 mg/L, 4 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	> 10000 mg/kg
Nonane (CAS 111-84-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	3200 ppm, 4 Hours 23.8 mg/L, 8 Hours 17 mg/L, 4 Hours
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg >= 15000 mg/kg
Nonane, 5-methyl- (CAS 15869-85-9)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	>= 3160 mg/kg, 24 Hours

Components	Species	Test Results
	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Monkey	>= 11160 mg/m3
	Not available	
	Rat	> 5000 mg/m3, 8 Hours > 4951 mg/m3, 4 Hours > 41 ppm, 8 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	> 5000 mg/kg
p-Diethyl benzene (CAS 105-05-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Inhalation</i>		
LC50	Mouse	30000 mg/m3
	Rat	> 5 mg/L, 4 Hours
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg 2000 mg/kg
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 24.9 mg/L, 4 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	> 5000 mg/kg
Pentane, 2,3,3-trimethyl- (CAS 560-21-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 24.9 mg/L, 4 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	> 5000 mg/kg
Pentane, 2,3,4-trimethyl- (CAS 565-75-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 24.9 mg/L, 4 Hours
<i>Oral</i>		
LD50	Not available	
	Rat	> 5000 mg/kg
Pentane, 3-methyl- (CAS 96-14-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5 ml/kg, 4 Hours, ECHA

Components	Species	Test Results
<i>Inhalation</i>		
LC50	Rat	73860 ppm, 4 Hours, ECHA
<i>Oral</i>		
LD50	Rat	> 25 ml/kg, ECHA 15.8 mg/kg, ECHA
<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>	Direct contact with eyes may cause temporary 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>Canada - Alberta OELs: Irritant</b>		
2,3-Dimethylhexane (CAS 584-94-1)	Irritant	
2,4-Dimethylhexane (CAS 589-43-5)	Irritant	
4-Methylheptane (CAS 589-53-7)	Irritant	
Isooctane (CAS 540-84-1)	Irritant	
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)	Irritant	
Pentane, 2,3,3-trimethyl- (CAS 560-21-4)	Irritant	
Pentane, 2,3,4-trimethyl- (CAS 565-75-3)	Irritant	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Mutagenicity</b>	Not classified.	
<b>Carcinogenicity</b>	See below.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Benzene, 1,2-dimethyl- (CAS 95-47-6)	Volume 47, Volume 71 - 3	Not classifiable as to carcinogenicity to humans.
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>		
Not listed.		
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects. Non-hazardous by WHMIS/OSHA criteria.	
<b>Teratogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.	
<b>Specific target organ toxicity - single exposure</b>	May cause drowsiness and dizziness.	
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.	
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Blood and nervous system disorders may occur after prolonged skin contact.	

## 12. Ecological Information

Components	Species	Test Results
<b>Ecotoxicity</b>	See below	
<b>Ecotoxicological data</b>		
Benzene, 1,2-dimethyl- (CAS 95-47-6)		
Algae	IC50	Algae 4.2 mg/L, 72 Hours
Crustacea	EC50	Daphnia 3.2 mg/L, 48 Hours
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna) 0.78 - 2.51 mg/L, 48 hours



Components		Species	Test Results
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	5.59 - 11.6 mg/L, 96 hours
Butane, 2-methyl- (CAS 78-78-4)			
Crustacea	EC50	Daphnia	2.3 mg/L, 48 Hours
Butyl benzene (CAS 104-51-8)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	0.27 - 0.44 mg/L, 48 hours
<b>Persistence and degradability</b>	Non-persistent/ Group 1		
<b>Bioaccumulative potential</b>			
<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)		

### 13. Disposal Considerations

<b>Disposal instructions</b>	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>	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>	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

**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.

#### Transportation of Dangerous Goods (TDG - Canada)

##### Basic shipping requirements:

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

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

2,2,3-trimethylbutane (CAS 464-06-2)	1 TONNES
2,2,4-Trimethylhexane (CAS 16747-26-5)	1 TONNES
2,3-Dimethylbutane (CAS 79-29-8)	1 TONNES
2,3-Dimethylhexane (CAS 584-94-1)	1 TONNES
2,4-Dimethylhexane (CAS 589-43-5)	1 TONNES
2,4-Dimethylpentane (CAS 108-08-7)	1 TONNES
2-Methyl-1-butene (technical) (CAS 563-46-2)	1 TONNES
3,3,4-trimethylhexane (CAS 16747-31-2)	1 TONNES
3-Methylhexane (CAS 589-34-4)	1 TONNES

Benzene, 1,2-dimethyl- (CAS 95-47-6)	1 TONNES
Butane, 2-methyl- (CAS 78-78-4)	1 TONNES
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)	1 TONNES
Isohexane (CAS 107-83-5)	1 TONNES
Isooctane (CAS 540-84-1)	1 TONNES
Nonane (CAS 111-84-2)	1 TONNES
Nonane, 5-methyl- (CAS 15869-85-9)	1 TONNES
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)	1 TONNES
Pentane, 2,3,3-trimethyl- (CAS 560-21-4)	1 TONNES
Pentane, 2,3,4-trimethyl- (CAS 565-75-3)	1 TONNES
Pentane, 3-methyl- (CAS 96-14-0)	1 TONNES

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

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Not regulated.

**WHMIS 2015 Exemptions**

Not applicable

**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)**

2,2,4-Trimethylhexane (CAS 16747-26-5)	1.0 % One-Time Export Notification only.
3,3,4-trimethylhexane (CAS 16747-31-2)	1.0 % One-Time Export Notification only.
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)	1.0 % One-Time Export Notification only.
Nonane (CAS 111-84-2)	1.0 % One-Time Export Notification only.

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

2,2,3-trimethylbutane (CAS 464-06-2)	Listed.
2,2,4-Trimethylhexane (CAS 16747-26-5)	Listed.
2,3-Dimethylbutane (CAS 79-29-8)	Listed.
2,3-Dimethylhexane (CAS 584-94-1)	Listed.
2,4-Dimethylhexane (CAS 589-43-5)	Listed.
2,4-Dimethylpentane (CAS 108-08-7)	Listed.
2- Methyl-1-butene (technical) (CAS 563-46-2)	Listed.
3,3,4-trimethylhexane (CAS 16747-31-2)	Listed.
3-Methylhexane (CAS 589-34-4)	Listed.
4- Methylheptane (CAS 589-53-7)	Listed.
Benzene, 1,2-dimethyl- (CAS 95-47-6)	Listed.
Butane, 2-methyl- (CAS 78-78-4)	Listed.
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Isooctane (CAS 540-84-1)	Listed.
Nonane (CAS 111-84-2)	Listed.
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)	Listed.
Pentane, 2,3,3-trimethyl- (CAS 560-21-4)	Listed.
Pentane, 2,3,4-trimethyl- (CAS 565-75-3)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.

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

Not listed.

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

<b>Hazard categories</b>	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
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**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
Not regulated.

**Other federal regulations**

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

Benzene, 1,2-dimethyl- (CAS 95-47-6)
Isooctane (CAS 540-84-1)

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

2-Methyl-1-butene (technical) (CAS 563-46-2)

Butane, 2-methyl- (CAS 78-78-4)

**US state regulations**

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. See below

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

2,2,4-Trimethylhexane (CAS 16747-26-5)	Listed.
2,3-Dimethylbutane (CAS 79-29-8)	Listed.
2,3-Dimethylhexane (CAS 584-94-1)	Listed.
2,4-Dimethylhexane (CAS 589-43-5)	Listed.
3,3,4-trimethylhexane (CAS 16747-31-2)	Listed.
4-Methylheptane (CAS 589-53-7)	Listed.
Benzene, 1,2-dimethyl- (CAS 95-47-6)	Listed.
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Isooctane (CAS 540-84-1)	Listed.
Nonane (CAS 111-84-2)	Listed.
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)	Listed.
Pentane, 2,3,3-trimethyl- (CAS 560-21-4)	Listed.
Pentane, 2,3,4-trimethyl- (CAS 565-75-3)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.

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

2,2,3-trimethylbutane (CAS 464-06-2)
2,2,4-Trimethylhexane (CAS 16747-26-5)
2,3-Dimethylbutane (CAS 79-29-8)
2,3-Dimethylhexane (CAS 584-94-1)
2,4-Dimethylhexane (CAS 589-43-5)
2,4-Dimethylpentane (CAS 108-08-7)
2- Methyl-1-butene (technical) (CAS 563-46-2)
3,3,4-trimethylhexane (CAS 16747-31-2)
3-Methylhexane (CAS 589-34-4)
4- Methylheptane (CAS 589-53-7)
Benzene, 1,2-dimethyl- (CAS 95-47-6)
Butane, 2-methyl- (CAS 78-78-4)
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)
Isohexane (CAS 107-83-5)
Isooctane (CAS 540-84-1)
Nonane (CAS 111-84-2)
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)
Pentane, 2,3,3-trimethyl- (CAS 560-21-4)
Pentane, 2,3,4-trimethyl- (CAS 565-75-3)
Pentane, 3-methyl- (CAS 96-14-0)

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

2,2,3-trimethylbutane (CAS 464-06-2)	Listed.
2,2,4-Trimethylhexane (CAS 16747-26-5)	Listed.
2,3-Dimethylbutane (CAS 79-29-8)	Listed.
2,3-Dimethylhexane (CAS 584-94-1)	Listed.
2,4-Dimethylhexane (CAS 589-43-5)	Listed.
2,4-Dimethylpentane (CAS 108-08-7)	Listed.
2- Methyl-1-butene (technical) (CAS 563-46-2)	Listed.
3,3,4-trimethylhexane (CAS 16747-31-2)	Listed.
3-Methylhexane (CAS 589-34-4)	Listed.
4- Methylheptane (CAS 589-53-7)	Listed.
Benzene, 1,2-dimethyl- (CAS 95-47-6)	Listed.
Butane, 2-methyl- (CAS 78-78-4)	Listed.
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Isooctane (CAS 540-84-1)	Listed.
Nonane (CAS 111-84-2)	Listed.
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)	Listed.
Pentane, 2,3,3-trimethyl- (CAS 560-21-4)	Listed.
Pentane, 2,3,4-trimethyl- (CAS 565-75-3)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.

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

Benzene, 1,2-dimethyl- (CAS 95-47-6)	XYLENE (ALL ISOMERS)
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**US - Minnesota Haz Subs: Listed substance**

2,3-Dimethylbutane (CAS 79-29-8)	Listed.
Benzene, 1,2-dimethyl- (CAS 95-47-6)	Listed.

Isohexane (CAS 107-83-5) Listed.  
Nonane, 5-methyl- (CAS 15869-85-9) Listed.  
Pentane, 3-methyl- (CAS 96-14-0) Listed.

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

2,3-Dimethylbutane (CAS 79-29-8)  
2,3-Dimethylhexane (CAS 584-94-1)  
2,4-Dimethylhexane (CAS 589-43-5)  
2,4-Dimethylpentane (CAS 108-08-7)  
2-Methyl-1-butene (technical) (CAS 563-46-2)  
3-Methylhexane (CAS 589-34-4)  
4-Methylheptane (CAS 589-53-7)  
Benzene, 1,2-dimethyl- (CAS 95-47-6)  
Butane, 2-methyl- (CAS 78-78-4)  
Butyl benzene (CAS 104-51-8)  
Isohexane (CAS 107-83-5)  
Isooctane (CAS 540-84-1)  
Nonane (CAS 111-84-2)  
p-Diethyl benzene (CAS 105-05-5)  
Pentane, 2,2,3-trimethyl- (CAS 564-02-3)  
Pentane, 2,3,3-trimethyl- (CAS 560-21-4)  
Pentane, 2,3,4-trimethyl- (CAS 565-75-3)

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

2,3-Dimethylbutane (CAS 79-29-8)  
Benzene, 1,2-dimethyl- (CAS 95-47-6)  
Isohexane (CAS 107-83-5)  
Pentane, 3-methyl- (CAS 96-14-0)

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

1,1,2-Trimethylcyclohexane (CAS 7094-26-0) Listed.  
2,2,3-trimethylbutane (CAS 464-06-2) Listed.  
2,2,4-Trimethylhexane (CAS 16747-26-5) Listed.  
2,3-Dimethylbutane (CAS 79-29-8) Listed.  
2,3-Dimethylhexane (CAS 584-94-1) Listed.  
2,4-Dimethylpentane (CAS 108-08-7) Listed.  
2- Methyl-1-butene (technical) (CAS 563-46-2) Listed.  
2) 3,3,4-trimethylhexane (CAS 16747-31-2) Listed.  
3-Methylhexane (CAS 589-34-4) Listed.  
4- Methylheptane (CAS 589-53-7) Listed.  
Benzene, 1,2-dimethyl- (CAS 95-47-6) Listed.  
Butane, 2-methyl- (CAS 78-78-4) Listed.  
Butyl benzene (CAS 104-51-8) Listed.  
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9) Listed.  
Isohexane (CAS 107-83-5) Listed.  
Isooctane (CAS 540-84-1) Listed.  
Nonane (CAS 111-84-2) Listed.  
Nonane, 5-methyl- (CAS 15869-85-9) Listed.  
p-Diethyl benzene (CAS 105-05-5) Listed.  
Pentane, 2,2,3-trimethyl- (CAS 564-02-3) Listed.  
Pentane, 2,3,3-trimethyl- (CAS 560-21-4) Listed.  
Pentane, 2,3,4-trimethyl- (CAS 565-75-3) Listed.  
Pentane, 3-methyl- (CAS 96-14-0) Listed.

**US. Massachusetts RTK - Substance List**

2,2,3-trimethylbutane (CAS 464-06-2)  
2,2,4-Trimethylhexane (CAS 16747-26-5)  
2,3-Dimethylbutane (CAS 79-29-8)  
2,3-Dimethylhexane (CAS 584-94-1)  
2,4-Dimethylhexane (CAS 589-43-5)  
2,4-Dimethylpentane (CAS 108-08-7)  
2- Methyl-1-butene (technical) (CAS 563-46-2)  
2) 3,3,4-trimethylhexane (CAS 16747-31-2)  
3-Methylhexane (CAS 589-34-4)  
4- Methylheptane (CAS 589-53-7)  
Benzene, 1,2-dimethyl- (CAS 95-47-6)  
Butane, 2-methyl- (CAS 78-78-4)  
Butyl benzene (CAS 104-51-8)  
Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)  
Isohexane (CAS 107-83-5)  
Isooctane (CAS 540-84-1)  
Nonane (CAS 111-84-2)  
p-Diethyl benzene (CAS 105-05-5)

Pentane, 2,2,3-trimethyl- (CAS 564-02-3)  
 Pentane, 2,3,3-trimethyl- (CAS 560-21-4)  
 Pentane, 2,3,4-trimethyl- (CAS 565-75-3)  
 Pentane, 3-methyl- (CAS 96-14-0)

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

2-Methyl-1-butene (technical) (CAS 563-46-2)  
 Benzene, 1,2-dimethyl- (CAS 95-47-6)  
 Butane, 2-methyl- (CAS 78-78-4)

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

2,2,3-trimethylbutane (CAS 464-06-2)  
 2,2,4-Trimethylhexane (CAS 16747-26-5)  
 2,3-Dimethylbutane (CAS 79-29-8)  
 2,3-Dimethylhexane (CAS 584-94-1)  
 2,4-Dimethylhexane (CAS 589-43-5)  
 2,4-Dimethylpentane (CAS 108-08-7)  
 2- Methyl-1-butene (technical) (CAS 563-46-2)  
 3,3,4-trimethylhexane (CAS 16747-31-2)  
 3- Methylhexane (CAS 589-34-4)  
 Benzene, 1,2-dimethyl- (CAS 95-47-6)  
 Butane, 2-methyl- (CAS 78-78-4)  
 Butyl benzene (CAS 104-51-8)  
 Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)  
 Isohexane (CAS 107-83-5)  
 Isooctane (CAS 540-84-1)  
 Nonane (CAS 111-84-2)  
 p-Diethyl benzene (CAS 105-05-5)  
 Pentane, 2,2,3-trimethyl- (CAS 564-02-3)  
 Pentane, 2,3,3-trimethyl- (CAS 560-21-4)  
 Pentane, 3-methyl- (CAS 96-14-0)

**US. Rhode Island RTK**

2,2,4-Trimethylhexane (CAS 16747-26-5)  
 2,3-Dimethylhexane (CAS 584-94-1)  
 2,4-Dimethylhexane (CAS 589-43-5)  
 3,3,4-trimethylhexane (CAS 16747-31-2)  
 4-Methylheptane (CAS 589-53-7)  
 Benzene, 1,2-dimethyl- (CAS 95-47-6)  
 Hexane, 2,2,5-trimethyl- (CAS 3522-94-9)  
 Isooctane (CAS 540-84-1)  
 Nonane (CAS 111-84-2)  
 Pentane, 2,2,3-trimethyl- (CAS 564-02-3)  
 Pentane, 2,3,3-trimethyl- (CAS 560-21-4)  
 Pentane, 2,3,4-trimethyl- (CAS 565-75-3)

**US. California Proposition 65**

Not Listed.

**Inventory status**

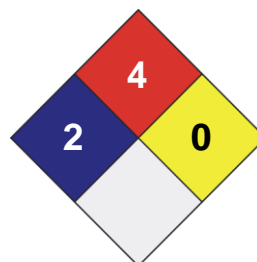
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*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

<b>HEALTH</b>	* 2
<b>FLAMMABILITY</b>	4
<b>PHYSICAL HAZARD</b>	0
<b>PERSONAL PROTECTION</b>	X



**Disclaimer**

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**Version #**

03

**Effective date**

23-January-2017

**Prepared by**

Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

**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.