



# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>Bunker #5, #5 Fuel oil, Bunker fuel, residual fuel oil #5</b>
<b>Other means of identification</b>	
<b>SDS number</b>	9618
<b>Recommended use</b>	Residual fuel oil for burner installations equipped with limited preheating facilities that require a fuel oil of lower viscosity than Type 6.
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer/Supplier</b>	Énergie Valero Inc. 1801 McGill College, 13e étage Montreal, Quebec H3A 2N4 Canutec (613) 996-6666 (888) 871-4404 (506) 857-5555 New Brunswick Poison Information Center Newfoundland Poison Control Center Nova Scotia / PEI Poison Control Center Ontario Regional Poison Information Center Quebec Poison Control Center

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable liquids	Category 3
	Physical hazards not otherwise classified	Category 1
<b>Health hazards</b>	Acute toxicity, inhalation	Category 3
	Skin corrosion/irritation	Category 2
	Carcinogenicity	Category 1B
	Reproductive toxicity	Category 2
	Specific target organ toxicity following single exposure	Category 3 narcotic effects
	Specific target organ toxicity following repeated exposure	Category 2 (Blood, Liver, Thymus)
	Aspiration hazard	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1

### Label elements

**Signal word**

Danger

**Hazard statement**

Flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. May cause cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs (blood, liver, thymus) through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects. Presents a physical hazard which is not otherwise classified.

## Precautionary statements

### Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. Do not breathe mist or vapour. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

### Response

IF SWALLOWED: Immediately call a POISON CENTRE/doctor. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. If skin irritation occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.

### Storage

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

### Disposal

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

### Other hazards

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.

### Supplemental information

Repeated exposure may cause skin dryness or cracking.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
Fuel Oil No. 6	68553-00-4	70 - 85
Clarified oils (petroleum), catalytic cracked	64741-62-4	0 - 55
Distillates (petroleum), intermediate catalytic cracked	64741-60-2	0 - 55
Distillates (petroleum), petroleum residues vacuum	68955-27-1	0 - 55
Residues (petroleum), topping plant, low-sulphur	68607-30-7	0 - 55
Residues (petroleum), vacuum	64741-56-6	0 - 55
Fuel Oil No. 2	68476-30-2	15 - 30
Nonane	111-84-2	0 - 0.7
Octane	111-65-9	0 - 0.5
Ethylbenzene	100-41-4	0 - 0.3
Toluene	108-88-3	0 - 0.3
Xylene	1330-20-7	0 - 0.3

### Composition comments

Small amount of hydrogen sulfide, a highly toxic gas, may be present, especially in the headspace of containers. All concentrations are in percent by volume unless otherwise indicated.

## 4. First-aid measures

### Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

### Skin contact

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

### Eye contact

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

### Ingestion

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

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

Aspiration may cause pulmonary oedema and pneumonitis. Dizziness. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain. Jaundice. Prolonged exposure may cause chronic effects.

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

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulfide (H <sub>2</sub> S) and flammability. 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. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent entry into waterways, sewer, basements or confined areas.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.  Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

## 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. Hydrogen sulfide, a very toxic gas, may be present with this material. Keep face clear of tank and/or tank car openings. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapour. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.
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**Conditions for safe storage, including any incompatibilities**

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see section 10 of the SDS). Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulfide (H<sub>2</sub>S) and flammability.

**8. Exposure controls/personal protection****Occupational exposure limits****US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)	TWA	5 mg/m <sup>3</sup>	Inhalable fraction.
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm	
Fuel Oil No. 2 (CAS 68476-30-2)	TWA	100 mg/m <sup>3</sup>	Inhalable fraction and vapor.
Fuel Oil No. 6 (CAS 68553-00-4)	TWA	5 mg/m <sup>3</sup>	Inhalable fraction.
Nonane (CAS 111-84-2)	TWA	200 ppm	
Octane (CAS 111-65-9)	TWA	300 ppm	
Toluene (CAS 108-88-3)	TWA	20 ppm	
Xylene (CAS 1330-20-7)	STEL	150 ppm	
	TWA	100 ppm	

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

Components	Type	Value	Form
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)	STEL	10 mg/m <sup>3</sup>	Mist.
	TWA	5 mg/m <sup>3</sup>	Mist.
Distillates (petroleum), intermediate catalytic cracked (CAS 64741-60-2)	TWA	1590 mg/m <sup>3</sup>	
		400 ppm	
Ethylbenzene (CAS 100-41-4)	STEL	543 mg/m <sup>3</sup>	
		125 ppm	
	TWA	434 mg/m <sup>3</sup>	
		100 ppm	
Fuel Oil No. 2 (CAS 68476-30-2)	TWA	100 mg/m <sup>3</sup>	
Fuel Oil No. 6 (CAS 68553-00-4)	STEL	10 mg/m <sup>3</sup>	Mist.
	TWA	5 mg/m <sup>3</sup>	Mist.
Nonane (CAS 111-84-2)	TWA	1050 mg/m <sup>3</sup>	
		200 ppm	
Octane (CAS 111-65-9)	TWA	1400 mg/m <sup>3</sup>	
		300 ppm	
Toluene (CAS 108-88-3)	TWA	188 mg/m <sup>3</sup>	
		50 ppm	
Xylene (CAS 1330-20-7)	STEL	651 mg/m <sup>3</sup>	
		150 ppm	
	TWA	434 mg/m <sup>3</sup>	
		100 ppm	

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

Components	Type	Value	Form
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)	TWA	1 mg/m3	Mist.
Distillates (petroleum), intermediate catalytic cracked (CAS 64741-60-2)	TWA	0.2 mg/m3	Mist.
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm	
Fuel Oil No. 2 (CAS 68476-30-2)	TWA	100 mg/m3	Vapor and aerosol.
Fuel Oil No. 6 (CAS 68553-00-4)	TWA	1 mg/m3	Mist.
Nonane (CAS 111-84-2)	TWA	200 ppm	
Octane (CAS 111-65-9)	TWA	300 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	Form
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)	TWA	5 mg/m3	Inhalable fraction.
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm	
Fuel Oil No. 2 (CAS 68476-30-2)	TWA	100 mg/m3	Inhalable fraction and vapor.
Nonane (CAS 111-84-2)	TWA	200 ppm	
Octane (CAS 111-65-9)	TWA	300 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	Form
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)	TWA	5 mg/m3	Inhalable fraction.
Ethylbenzene (CAS 100-41-4)	STEL	125 ppm	
	TWA	100 ppm	
Fuel Oil No. 2 (CAS 68476-30-2)	TWA	100 mg/m3	Inhalable fraction and vapor.
Fuel Oil No. 6 (CAS 68553-00-4)	TWA	5 mg/m3	Inhalable fraction.
Nonane (CAS 111-84-2)	TWA	200 ppm	
Octane (CAS 111-65-9)	TWA	300 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 Labour, Employment and Social Solidarity – Occupational Health and Safety Regulation)**

Components	Type	Value	Form
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Distillates (petroleum), intermediate catalytic cracked (CAS 64741-60-2)	TWA	1590 mg/m3	

**Canada. Quebec OELs (Ministry of Labour, Employment and Social Solidarity – Occupational Health and Safety Regulation)**

Components	Type	Value	Form
Ethylbenzene (CAS 100-41-4)	STEL	400 ppm	
		543 mg/m3	
	TWA	125 ppm	
		434 mg/m3	
Nonane (CAS 111-84-2)	TWA	100 ppm	
		1050 mg/m3	
Octane (CAS 111-65-9)	STEL	200 ppm	
		1750 mg/m3	
	TWA	375 ppm	
		1400 mg/m3	
Toluene (CAS 108-88-3)	TWA	300 ppm	
		188 mg/m3	
Xylene (CAS 1330-20-7)	STEL	50 ppm	
		651 mg/m3	
	TWA	150 ppm	
		434 mg/m3	
		100 ppm	

**Biological limit values**

**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling time
Ethylbenzene (CAS 100-41-4)	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in 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**

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

**Canada - British Columbia OELs: Skin designation**

Fuel Oil No. 2 (CAS 68476-30-2) Can be absorbed through the skin.

**Canada - Manitoba OELs: Skin designation**

Fuel Oil No. 2 (CAS 68476-30-2) Can be absorbed through the skin.

**Canada - Ontario OELs: Skin designation**

Fuel Oil No. 2 (CAS 68476-30-2) Can be absorbed through the skin.

**Canada - Quebec OELs: Skin designation**

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

**Canada - Saskatchewan OELs: Skin designation**

Fuel Oil No. 2 (CAS 68476-30-2) Can be absorbed through the skin.

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

**US ACGIH Threshold Limit Values: Skin designation**

Fuel Oil No. 2 (CAS 68476-30-2) Can be absorbed through the skin.

**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash fountain and emergency showers are recommended.

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

<b>Eye/face protection</b>	Wear chemical splash goggles.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves.
<b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
<b>Respiratory protection</b>	Chemical respirator with organic vapour cartridge and full facepiece.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.

<b>General hygiene considerations</b>	Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
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**9. Physical and chemical properties****Appearance**

<b>Physical state</b>	
<b>Form</b>	Liquid.
<b>Colour</b>	Oily, viscous liquid.
	Black or dark brown.

<b>Odour</b>	Characteristic hydrocarbon.
<b>Odour threshold</b>	Not available.

<b>pH</b>	Not available.
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<b>Melting point/freezing point</b>	Not available.
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<b>Initial boiling point and boiling range</b>	145 - 600 °C (293 - 1112 °F)
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<b>Flash point</b>	> 54.0 °C (> 129.2 °F) Pensky-Martens Closed Cup
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<b>Evaporation rate</b>	Not available.
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<b>Flammability (solid, gas)</b>	Flammable liquid and vapour.
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**Upper/lower flammability or explosive limits**

<b>Flammability limit - lower (%)</b>	Not available.
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<b>Flammability limit - upper (%)</b>	Not available.
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<b>Vapour pressure</b>	Not available.
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<b>Vapour density</b>	Not available.
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<b>Relative density</b>	0.915 - 0.995 [H <sub>2</sub> O = 1]
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**Solubility(ies)**

<b>Solubility (water)</b>	Not available.
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<b>Partition coefficient (n-octanol/water)</b>	Not available.
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<b>Auto-ignition temperature</b>	Not available.
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<b>Decomposition temperature</b>	Not available.
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<b>Viscosity</b>	15 - 100 cSt at 122°F (50°C)
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**Other information**

<b>Explosive properties</b>	Not explosive.
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<b>Oxidising properties</b>	Not oxidising.
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**10. Stability and reactivity**

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
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<b>Chemical stability</b>	Material is stable under normal conditions.
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<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
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<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
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<b>Incompatible materials</b>	Strong oxidising agents.
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## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause damage to organs through prolonged or repeated exposure by inhalation.
<b>Skin contact</b>	Causes skin irritation. Repeated exposure may cause skin dryness or cracking.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

### Symptoms related to the physical, chemical and toxicological characteristics

Aspiration may cause pulmonary oedema and pneumonitis. Dizziness. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain. Jaundice. Prolonged exposure may cause chronic effects.

### Information on toxicological effects

**Acute toxicity** May be fatal if swallowed and enters airways.

Components	Species	Test results
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)		
<b><u>Acute</u></b>		
<b>Inhalation</b>		
<i>Aerosol</i>		
LC50	Rat	> 320 mg/m3, 4 Hours
Distillates (petroleum), intermediate catalytic cracked (CAS 64741-60-2)		
<b><u>Acute</u></b>		
<b>Inhalation</b>		
<i>Aerosol</i>		
LC50	Rat	> 3.19 mg/l, 4 Hours
Ethylbenzene (CAS 100-41-4)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rabbit	15400 mg/kg
<b>Inhalation</b>		
LC50	Rat	17.4 mg/l, 4 hours
<b>Oral</b>		
LD50	Rat	3500 - 4700 mg/kg
Fuel Oil No. 6 (CAS 68553-00-4)		
<b><u>Acute</u></b>		
<b>Inhalation</b>		
LC50	Rat	4.6 - 7.64 mg/l, 4 hours
Toluene (CAS 108-88-3)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rabbit	12200 mg/kg
<b>Inhalation</b>		
<i>Vapour</i>		
LC50	Rat	28.1 mg/l, 4 Hours
Xylene (CAS 1330-20-7)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Rat	3523 mg/kg

**Skin corrosion/irritation** Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.



## Respiratory or skin sensitisation

### Canada - Alberta OELs: Irritant

Octane (CAS 111-65-9)

Irritant

**Respiratory sensitisation** Not a respiratory sensitizer.

**Skin sensitisation** Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** May cause cancer.

### ACGIH Carcinogens

Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)

A4 Not classifiable as a human carcinogen.

Distillates (petroleum), intermediate catalytic cracked (CAS 64741-60-2)

A2 Suspected human carcinogen.

Ethylbenzene (CAS 100-41-4)

A3 Confirmed animal carcinogen with unknown relevance to humans.

Fuel Oil No. 2 (CAS 68476-30-2)

A3 Confirmed animal carcinogen with unknown relevance to humans.

Fuel Oil No. 6 (CAS 68553-00-4)

A4 Not classifiable as a human carcinogen.

Toluene (CAS 108-88-3)

A4 Not classifiable as a human carcinogen.

Xylene (CAS 1330-20-7)

A4 Not classifiable as a human carcinogen.

### Canada - Manitoba OELs: carcinogenicity

Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)

Not classifiable as a human carcinogen.

Distillates (petroleum), intermediate catalytic cracked (CAS 64741-60-2)

Suspected human carcinogen.

Ethylbenzene (CAS 100-41-4)

Confirmed animal carcinogen with unknown relevance to humans.

Fuel Oil No. 2 (CAS 68476-30-2)

Confirmed animal carcinogen with unknown relevance to humans.

Toluene (CAS 108-88-3)

Not classifiable as a human carcinogen.

Xylene (CAS 1330-20-7)

Not classifiable as a human carcinogen.

### IARC Monographs. Overall Evaluation of Carcinogenicity

Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)

2B Possibly carcinogenic to humans.

Ethylbenzene (CAS 100-41-4)

2B Possibly carcinogenic to humans.

Fuel Oil No. 2 (CAS 68476-30-2)

3 Not classifiable as to carcinogenicity to humans.

Fuel Oil No. 6 (CAS 68553-00-4)

2B Possibly carcinogenic to humans.

Residues (petroleum), vacuum (CAS 64741-56-6)

2B Possibly carcinogenic to humans.

Toluene (CAS 108-88-3)

3 Not classifiable as to carcinogenicity to humans.

Xylene (CAS 1330-20-7)

3 Not classifiable as to carcinogenicity to humans.

### US. National Toxicology Program (NTP) Report on Carcinogens

Distillates (petroleum), intermediate catalytic cracked (CAS 64741-60-2)

Known To Be Human Carcinogen.

**Reproductive toxicity** Suspected of damaging fertility or the unborn child.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** May cause damage to organs (blood, liver, thymus) through prolonged or repeated exposure.

**Aspiration hazard** May be fatal if swallowed and enters airways.

**Chronic effects** May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. Contains hydrogen sulfide. May rapidly cause irritation, breathing failure, coma, and death without necessarily any warning odor being sensed.

## 12. Ecological information

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Components	Species	Test results
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)		
<b>Aquatic</b>		
<i>Chronic</i>		
Fish	NOAEL Onchorhynchus mykiss	0.1 mg/l, 28 days

Components	Species		Test results
Distillates (petroleum), intermediate catalytic cracked (CAS 64741-60-2)			
Aquatic			
Chronic			
Fish	NOAEL	Oncorhynchus mykiss	0.029 mg/l, 14 days
Ethylbenzene (CAS 100-41-4)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	1.81 - 2.38 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4.2 mg/l, 96 hours
Chronic			
Crustacea	EC50	Ceriodaphnia dubia	3.6 mg/l, 7 days
Octane (CAS 111-65-9)			
Aquatic			
Crustacea	LC50	Daphnia magna	0.38 mg/l, 48 hours
Residues (petroleum), topping plant, low-sulphur (CAS 68607-30-7)			
Aquatic			
Fish	LC50	Fish	48 mg/l, 48 Hours
Toluene (CAS 108-88-3)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia magna	11.5 mg/l, 48 hours
Fish	LC50	Oncorhynchus kisutch	5.5 mg/l, 96 hours
Chronic			
Crustacea	NOEC	Ceriodaphnia dubia	0.74 mg/l, 7 days
Fish	NOEC	Oncorhynchus kisutch	1.4 mg/l, 40 days
Xylene (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.6 mg/l, 96 hours
Persistence and degradability	No data available.		
Bioaccumulative potential	No data available.		
Partition coefficient n-octanol / water (log Kow)			
Ethylbenzene (CAS 100-41-4)	3.15		
Nonane (CAS 111-84-2)	5.46		
Octane (CAS 111-65-9)	5.18		
Toluene (CAS 108-88-3)	2.73		
Xylene (CAS 1330-20-7)	3.2		
Mobility in soil	No data 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	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.		
Local disposal regulations	Dispose in accordance with all applicable regulations.		
Hazardous waste code	D001: Waste Flammable material with a flash point <140 F The waste code should be assigned in discussion between the user, the producer and the waste disposal company.		
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).		

**Contaminated packaging**

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information****TDG**

**UN number** UN1268  
**UN proper shipping name** Petroleum distillates, n.o.s. (Fuel Oil No. 6)  
**Transport hazard class(es)**  
**Class** 3  
**Subsidiary risk** -  
**Packing group** III  
**Environmental hazards** Yes  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IATA**

**UN number** UN1268  
**UN proper shipping name** Petroleum distillates, n.o.s. (Fuel Oil No. 6)  
**Transport hazard class(es)**  
**Class** 3  
**Subsidiary risk** -  
**Label(s)** 3  
**Packing group** III  
**Environmental hazards** Yes  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

**UN number** UN1268  
**UN proper shipping name** PETROLEUM DISTILLATES, N.O.S. (Fuel Oil No. 6)  
**Transport hazard class(es)**  
**Class** 3  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards** I  
**Marine pollutant**  
**EmS** Yes  
F-E, S-E  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

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

**General information** IMDG Regulated Marine Pollutant.

**15. Regulatory information**

**Canadian regulations** This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

**Controlled Drugs and Substances Act**

Not regulated.

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

Not listed.

**Greenhouse Gases**

Not listed.

**Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)**

Ethylbenzene (CAS 100-41-4)

Toluene (CAS 108-88-3)

Xylene (CAS 1330-20-7)

**Precursor Control Regulations**

Toluene (CAS 108-88-3)

Class B

**International regulations Stockholm**

**Convention:** Not applicable.

**Rotterdam Convention:** Not applicable.

**Kyoto protocol**

Not applicable.

**Montreal Protocol**

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information**

**Issue date** 27-February-2017

**Revision date** -

**Version No.** 01

**Disclaimer** Énergie Valero Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.