

## BUNKER FUEL #5

### Section 1. Identification

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**Common name:** BUNKER FUEL #5

**Product Code:** 9618

**Synonym:** BUNKER #5, #5 FUEL OIL, BUNKER FUEL, RESIDUAL FUEL OIL #5

**Material uses:** Residual fuel oil for burner installations equipped with limited preheating facilities that require a fuel oil of lower viscosity than Type 6.

**Supplier / Manufacturer:**

Énergie Valero Inc.  
1801 McGill College, 13e étage  
Montréal  
Québec, Canada, H3A 2N4  
Phone: 800-295-0391

**In case of emergency:**

**CANUTEC:** (613) 996-6666  
**Quebec Poison Control Center:** 800-463-5060  
**Ontario Regional Poison Information Center (Toronto):** 416-813-5900  
**Ontario Regional Poison Information Center (toll-free):** 800-268-9017  
**Newfoundland Poison Information Center:** 709-722-1110  
**Nova Scotia / PEI Poison Control Center:** 800-565-8161  
Or call your local Emergency Health Services Center.

### Section 2. Hazards identifications

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**Classification:**



Flammable liquid, Category 3

Acute toxicity (inhalation), Category 4

Carcinogenicity, Category 1B

Reproductive toxicity, Category 2

Specific target organ toxicity - Repeated exposure, Category 2

**Signal word:** Danger

**Hazard statements:**

H226: Flammable liquid and vapor.

H332: Harmful if inhaled.

H350: May cause cancer.

H361: Suspected of damaging fertility or the unborn child.

H373: May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements:**

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260: Do not breathe dust/fumes/gas/mist/vapors/spray.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P308+P313: If exposed: Call a POISON CENTER or doctor/physician.

P312: Call a POISON CENTER or doctor if you feel unwell.

P314: Get medical advice/attention if you feel unwell.

P370+P378: In case of fire: See section 5 for extinguish medias.

P403+P235: Store in a well ventilated place. Keep cool.

P405: Store locked up.

P501: Dispose of contents / container by a local waste disposal company according to regional regulations.

**Section 3. Composition and information on ingredients**

Name	CAS	Concentration %
Fuel oil no. 6	68553-00-4	70 - 85
Residues (petroleum), vacuum	64741-56-6	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-sulfur	68607-30-7	0 - 55
Clarified oils (petroleum), catalytic cracked	64741-62-4	0 - 55
Diesel fuel (fuel oil)	68476-30-2	15 - 30
Nonane	111-84-2	0 - 0.7
Octane	111-65-9	0 - 0.5
Toluene	108-88-3	0 - 0.3
Xylene	1330-20-7	0 - 0.3
Ethylbenzene	100-41-4	0 - 0.3

**Note:**

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

**Section 4. First aid measures****Description of first aid if required:**

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.

**Eye contact:**

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

**Skin contact:**

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

**Inhalation:**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell.

**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.

**Indication of immediate medical attention and special treatment needed, if necessary:**

Treat according to symptoms. 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.

**Most important acute symptoms and effects:**

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain.

**Most important delayed symptoms and effects:**

Aspiration may cause pulmonary oedema and pneumonitis.

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**Section 5. Firefighting measures**

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**Flammability of the product:**

Flammable liquid and vapor.

**Flash point:**

< 54°C / 129.2°F

**Auto-ignition temperature:**

Data not available

**Products of combustion:**

Data not available

**Special protective actions for firefighters:**

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Move away immediately if the whistling sound from the safety devices increases or the discoloration of the tanks caused by a fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Vapours may form explosive air mixtures even at room temperature. Prevent buildup of vapours or gasses to explosive concentrations. Some of these materials, if spilled, may evaporate leaving a flammable residue. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed. In the event of fire and/or explosion do not breathe fumes.

**Suitable extinguishing media:**

Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>). Do not use a solid water stream as it may scatter and spread fire.

**Specific hazard arising from the chemical:**

Vapor may cause flash fire. Vapors can flow along surfaces to distant ignition source and cause flashback. Sensitive to static discharge.

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**Section 6. Accidental release measures**

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**Personal precautions, protective equipment and emergency procedures:**

**For non emergency personnel:** Evacuate the area.

**For emergency personnel:** Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 for personal protective equipment. Local authorities should be advised according to applicable regulatory requirements.

**Environmental precautions:**

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.

**Methods and material for containment and cleaning up:**

Eliminate all sources of ignition (no cigarettes, torches, sparks or flames in the immediate area). Keep combustible materials (wood, paper, oil, etc.) away from the spilled product. Take precautionary measures against electrostatic discharge. Use tools that do not produce sparks. Prevent entry into waterways, sewers, basements or confined areas.

For large spills: Stop flow of substance if it can be done without risk. Dike spilled material, where possible. Use a non-combustible material such as vermiculite, sand or earth to absorb the product and place it in a container for later disposal. After collecting the product, rinse the area with water.

For small spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (eg, cloth, woolen). Clean the surface thoroughly to remove residual contamination.

Never put the spilled product back into its original container for reuse. Place the material in suitable, covered and labeled containers. For waste disposal, see section 13 of the safety data sheet.

**Section 7. Handling and storage****Precautions in Handling:**

Obtain instructions before use. Do not handle until you have read and understood all the safety precautions. Do not handle, store or open near an open flame, source of heat or other sources of ignition. Protect the product from direct sunlight. Do not smoke during use. Use local and general explosion-proof exhaust ventilation. Take precautionary measures against electrostatic discharge. All equipment used in handling this product must be earthed. Use non-sparking tools and explosion-proof equipment. Do not breathe mists or vapors. Avoid contact with eyes, skin and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only outdoors or in a well ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release into the environment. Observe good industrial hygiene practices.

**Precautions in Storage:**

Storage of flammable liquids. Do not handle or store near an open flame, heat source or other sources of ignition. This product can accumulate static charges which can cause sparks and become a source of ignition. Pressure in sealed containers may increase under the influence of heat. Keep the container in a cool, well-ventilated place. Keep away from food, drink and animal feed. Keep out of the reach of children.

**Section 8. Exposure Controls, Personal Protections****Control parameters:**

Component	CAS	Value	Control parameters	Basis
Toluene	108-88-3	TWA	20 ppm	USA - ACGIH
		TWA	50 ppm	Canada - Alberta
		TWA	188 mg/m <sup>3</sup>	Canada - Alberta
		TWA	20 ppm	Canada - British Columbia
		TWA	20 ppm	Canada - Manitoba
		TWA	20 ppm	Canada - Ontario
		TWA	188 mg/m <sup>3</sup>	Canada - Québec
		TWA	50 ppm	Canada - Québec

**Control parameters (continued):**

Component	CAS	Value	Control parameters	Basis
Xylene	1330-20-7	STEL	150 ppm	USA - ACGIH
		TWA	100 ppm	USA - ACGIH
		STEL	651 mg/m <sup>3</sup>	Canada - Alberta
		STEL	150 ppm	Canada - Alberta
		TWA	434 mg/m <sup>3</sup>	Canada - Alberta
		TWA	100 ppm	Canada - Alberta
		STEL	150 ppm	Canada - British Columbia
		TWA	100 ppm	Canada - British Columbia
		STEL	150 ppm	Canada - Manitoba
		TWA	100 ppm	Canada - Manitoba
		STEL	150 ppm	Canada - Ontario
		TWA	100 ppm	Canada - Ontario
		STEL	651 mg/m <sup>3</sup>	Canada - Québec
		STEL	150 ppm	Canada - Québec
		TWA	434 mg/m <sup>3</sup>	Canada - Québec
TWA	100 ppm	Canada - Québec		
Octane	111-65-9	TWA	300 ppm	USA - ACGIH
		TWA	1400 mg/m <sup>3</sup>	Canada - Alberta
		TWA	300 ppm	Canada - Alberta
		TWA	300 ppm	Canada - British Columbia
		TWA	300 ppm	Canada - Manitoba
		TWA	300 ppm	Canada - Ontario
		STEL	1750 mg/m <sup>3</sup>	Canada - Québec
		STEL	375 ppm	Canada - Québec
		TWA	1400 mg/m <sup>3</sup>	Canada - Québec
		TWA	300 ppm	Canada - Québec
		Ethylbenzene	100-41-4	STEL
STEL	125 ppm			Canada - Alberta
TWA	434 mg/m <sup>3</sup>			Canada - Alberta
TWA	100 ppm			Canada - Alberta
TWA	20 ppm			Canada - British Columbia
TWA	20 ppm			Canada - Manitoba
TWA	20 ppm			Canada - Ontario
STEL	543 mg/m <sup>3</sup>			Canada - Québec
STEL	125 ppm			Canada - Québec
TWA	434 mg/m <sup>3</sup>			Canada - Québec
TWA	100 ppm			Canada - Québec
TWA	20 ppm			USA - ACGIH

**Control parameters (continued):**

Component	CAS	Value	Control parameters	Basis
Diesel fuel (fuel oil)	68476-30-2	TWA	100 mg/m <sup>3</sup>	Canada - British Columbia
		TWA	100 mg/m <sup>3</sup>	Canada - Manitoba
		TWA	100 mg/m <sup>3</sup> (inhalable fraction)	USA - ACGIH
Nonane	111-84-2	TWA	200 ppm	Canada - Québec
		TWA	1050 mg/m <sup>3</sup>	Canada - Québec
		TWA	200 ppm	Canada - Alberta
		TWA	1050 mg/m <sup>3</sup>	Canada - Alberta
		TWA	200 ppm	Canada - British Columbia
		TWA	200 ppm	Canada - Manitoba
		TWA	200 ppm	Canada - Ontario
		TWA	200 ppm	USA - ACGIH
Fuel oil no. 6	68553-00-4	TWA	5 mg/m <sup>3</sup> (inhalable fraction)	USA - ACGIH
		STEL	10 mg/m <sup>3</sup>	Canada - Alberta
		TWA	5 mg/m <sup>3</sup>	Canada - Alberta
		TWA	1 mg/m <sup>3</sup>	Canada - British Columbia
		TWA	5 mg/m <sup>3</sup>	Canada - Ontario
Distillates (petroleum), intermediate catalytic cracked	64741-60-2	TWA	1590 mg/m <sup>3</sup>	Canada - Québec
		TWA	400 ppm	Canada - Québec
		TWA	1590 mg/m <sup>3</sup>	Canada - Alberta
		TWA	400 ppm	Canada - Alberta
Clarified oils (petroleum), catalytic cracked	64741-62-4	TWA	5 mg/m <sup>3</sup> (inhalable fraction)	USA - ACGIH
		STEL	10 mg/m <sup>3</sup>	Canada - Québec
		TWA	5 mg/m <sup>3</sup>	Canada - Québec
		TWA	5 mg/m <sup>3</sup> (inhalable fraction)	Canada - Ontario
		STEL	10 mg/m <sup>3</sup>	Canada - Alberta
		STEL	5 mg/m <sup>3</sup>	Canada - Alberta
		TWA	1 mg/m <sup>3</sup>	Canada - British Columbia
		TWA	5 mg/m <sup>3</sup> (inhalable fraction)	Canada - Manitoba

**Engineering controls:**

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.

**Personal protective equipment:**

**Eyes:** Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

**Skin/body:** Wear chemical-resistant, impervious gloves. Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended. Wear appropriate thermal protective clothing, when necessary.

**Respiratory:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.

**Hands:** Avoid exposure - obtain special instructions before use. Wear protective gloves.

**Other:** Consult supervisor for special handling instructions. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

## Section 9. Physical and chemical properties

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**Physical state:** Liquid

**Color:** Black, dark brown

**Odour:** Characteristic (hydrocarbon)

**Melting point/Freezing point:** Data not available

**Boiling point:** From 145°C / 293°F to 600°C / 1112°F

**Appearance:** Oily, viscous liquid

**Flash point:** < 54°C / 129.2°F (Pensky-Martens closed cup)

**Auto-ignition temperature:** Data not available

**pH:** Data not available

**Kinematic viscosity:** 15 - 100 cSt @ 122°F (50°C)

**Solubility:** Negligible

**Density:** 0.915 - 0.995

## Section 10. Stability and reactivity

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**Chemical reactivity:** The product is non-reactive under normal conditions of use, storage and transport.

**Chemical stability:** Stable under normal temperature conditions and recommended use.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.

**Incompatible materials:** Strong oxidising agents.

**Hazardous decomposition products:** No hazardous decomposition products are known.

## Section 11. Toxicological information

### Acute toxicity:

Component	CAS	Value
Fuel oil no. 6	68553-00-4	CL <sub>50</sub> Inhalation: Rat - = 4.6 mg/L 4h
Distillates (petroleum), intermediate catalytic cracked	64741-60-2	CL <sub>50</sub> Inhalation: Rat - = 3.19 mg/L 4h
Clarified oils (petroleum), catalytic cracked	64741-62-4	DL <sub>50</sub> Oral: Rat = 4300 mg/kg
Diesel fuel (fuel oil)	68476-30-2	DL <sub>50</sub> Oral: Rat = 12000 mg/kg CL <sub>50</sub> Inhalation: Rat = 4100 mg/m <sup>3</sup> - 4h
Nonane	111-84-2	CL <sub>50</sub> Inhalation: Rat = 3200 ppm - 4h
Toluene	108-88-3	DL <sub>50</sub> Oral: Rat = 636 mg/kg DL <sub>50</sub> Cutaneous: Rat = 12200 mg/kg CL <sub>50</sub> Inhalation: Rat = 28.1 mg/L - 4h
Xylene	1330-20-7	DL <sub>50</sub> Oral: Rat = 3523 mg/kg DL <sub>50</sub> Cutaneous: Rabbit = 5000 mg/kg CL <sub>50</sub> Inhalation: Rat = 27.6 mg/L - 4h
Ethylbenzene	100-41-4	DL <sub>50</sub> Oral: Rat = 3500 mg/kg DL <sub>50</sub> Cutaneous: Rabbit > 15400 mg/kg CL <sub>50</sub> Inhalation: Rat = 17.4 mg/L - 4h

### Skin corrosion/irritation:

Nonane: Causes skin irritation.

Octane: Causes skin irritation.

Toluene: Causes skin irritation.

Xylene: Causes skin irritation.

Ethylbenzene: Causes skin irritation

### Serious eye damage/irritation:

Not applicable

### Respiratory or skin sensitisation:

Not applicable

### Germ cell mutagenicity:

Not applicable

### Carcinogenicity:

Clarified oils (petroleum), catalytic cracked: May cause cancer.

Ethylbenzene: Suspected of causing cancer



**Reproductive toxicity:**

Toluene: Suspected of damaging fertility or the unborn child.

Xylene: Suspected of damaging fertility or the unborn child

**STOT- Single exposure:**

Octane: May cause drowsiness or dizziness.

Toluene: May cause drowsiness or dizziness.

Xylene: May cause irritation to respiratory tract and may cause drowsiness or dizziness

**STOT- repeated exposure:**

Toluene: May cause damage to organs through prolonged or repeated exposure cause the hazard.

Xylene: May cause damage to organs through prolonged or repeated exposure cause the hazard.

**Aspiration hazard:**

Nonane: May be fatal if swallowed and enters airways.

Octane: May be fatal if swallowed and enters airways.

Toluene: May be fatal if swallowed and enters airways.

Xylene: May be fatal if swallowed and enters airways.

Ethylbenzene: May be fatal if swallowed and enters airways

**Information on likely route of exposure:**

Skin, eyes, inhalation and ingestion.

**Section 12. Ecological information****Ecological data for aquatic environments:**

Component	CAS	Value
Octane	111-65-9	CL <sub>50</sub> - Fish 0.42 mg/L - 96h CE <sub>50</sub> - Daphnia magna 0.38 mg/L - 48h
Toluene	108-88-3	CL <sub>50</sub> - Oncorhynchus kisutch 5.5 mg/L - 96h CE <sub>50</sub> - Daphnia magna 11.5 mg/L - 48h
Ethylbenzene	100-41-4	CE <sub>50</sub> - Menidia menidia (atlantic silverside) 5.1 mg/L - 96h CL <sub>50</sub> - Daphnia magna 1.8 mg/L - 48h CE <sub>50</sub> - Skeletonema costatum 4.9 mg/L - 72h

**Persistence and degradability:**

Ethylbenzene: Easily biodegradable

**Bioaccumulative potential:**

Data not available

**Mobility in soil:**

Data not available

**Other adverse effects:**


Data not available


## Section 13. Disposal considerations


### Waste disposal:


Dispose of this material and its container to hazardous or special waste collection point. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations. Waste codes should be assigned by the user based on the application for which the product was used. Dispose of in accordance with local regulations. Offer rinsed packaging material to local recycling facilities.

## Section 14. Transportation information

TDG		
UN #: UN1268	Proper shipping name: PETROLEUM DISTILLATES, N.O.S. (Fuel Oil No. 6)	
Class: 3	Packing group: III	

DOT		
UN #: UN1268	Proper shipping name: PETROLEUM DISTILLATES, N.O.S. (Fuel Oil No. 6)	
Class: 3	Packing group: III	

IMDG		
UN #: UN1268	Proper shipping name: PETROLEUM DISTILLATES, N.O.S. (Fuel Oil No. 6)	
Class: 3	Packing group: III	

IATA		
UN #: UN1268	Proper shipping name: PETROLEUM DISTILLATES, N.O.S. (Fuel Oil No. 6)	
Class: 3	Packing group: III	

## Section 15. Regulatory information

### NFPA Classification:



Health : 3  
 Flammable : 2  
 Stability : 0  
 Special hazards : 0

Legend: 4: Severe, 3: High, 2: Moderate, 1: Slightly, 0: Not hazardous

### General product information:

Canada: This product has been classified in accordance with the hazard criteria of the hazard product regulations and the safety data sheet contains all the information required by the hazard product regulations.

## Section 16. Additional information

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**Date of issue:**

2021-09-15

**Version:**

1.00

**Elaborated by:**

Toxyscan Inc.

**Notice to reader:**

To the best of our knowledge, the information contained in this document is accurate. However, neither Toxyscan Inc., nor the supplier, nor any of their affiliates can assume any responsibility for the accuracy or completeness of the information contained herein. All materials may present unknown hazards and should be used with caution. Although some hazards are described herein, we cannot guarantee that there are no other hazards. Valero Energy Inc. can not anticipate all conditions of use of this information and its product, or products of other manufacturers associated with its product. It is the responsibility of the user to ensure safe handling, storage and disposal of the product. The user is liable for any loss, injury, damage or expense caused by improper use.