



SAFETY DATA SHEET

1. Identification

Product identifier	Marine Fuel Oil
Other means of identification	
Product code	8821
Synonyms	RMG 380, RMG 180
Recommended use	Fuel.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer/Supplier	Énergie Valero Inc. 1801 McGill College, 13e étage Montreal, Quebec H3A 2N4
General Information	1-800-295-0391
24-Hour Emergency	Canutec (613) 996-6666
New Brunswick Poison Information Center	(506) 857-5555
Newfoundland Poison Control Center	(709) 722-1110
Nova Scotia / PEI Poison Control Center	1-800-565-8161
Ontario Regional Poison Information Center	1-800-267-1373 (Ottawa) 1-800-268-9017 (Toronto)
Quebec Poison Control Center	1-800-463-5060

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 4
Health hazards	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Carcinogenicity	Category 1B
	Reproductive toxicity	Category 2
	Specific target organ toxicity following repeated exposure	Category 2 (blood, bone marrow, liver, thymus)
Environmental hazards	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

Combustible liquid. Causes skin irritation. Harmful if inhaled. May cause cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs (blood, bone marrow, liver, thymus) through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.

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. Do not breathe mist or vapour. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response

IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF exposed or concerned: Get medical advice/attention. Call a POISON CENTRE/doctor if you feel unwell. If skin irritation occurs: 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. Store locked up.

Disposal

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

Other hazards

None known.

Supplemental information

None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Fuel oil no. 6	68553-00-4	0 - 100

Constituents	CAS number	%
Residues (petroleum), vacuum	64741-56-6	0 - 70
Clarified oils (petroleum), catalytic cracked	64741-62-4	0 - 70
Distillates (petroleum), intermediate catalytic cracked	64741-60-2	0 - 70
Residues (petroleum), topping plant, low-sulphur	68607-30-7	0 - 70
Fuel oil no. 2	68476-30-2	0 - 50
Hydrogen sulphide	7783-06-4	0 - 1

Composition comments

All concentrations are in percent by weight. This product may contain hydrogen sulfide, especially in the headspace of containers.

4. First-aid measures

Inhalation

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

Skin contact

Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if any discomfort continues. 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

Dizziness. Skin irritation. May cause redness and pain. Jaundice. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

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.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

The product is combustible, and heating may generate vapours which may form explosive vapour/air mixtures. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Keep run-off water out of sewers and water sources. Dike for water control.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

Combustible liquid.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

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 vapours or spray mist. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised according to applicable regulatory requirements. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Prevent product from entering drains.

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. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulfide (H2S) and flammability. Collect runoff for recycling or disposal as potential hazardous waste.

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.

7. Handling and storage**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from open flames, hot surfaces and sources of ignition. Do not breathe vapours or spray mist. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. 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 to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. 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. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulfide (H2S) and flammability. Store away from incompatible materials (see section 10 of the SDS).

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

Components	Type	Value	Form
Fuel oil no. 6 (CAS 68553-00-4)	TWA	5 mg/m3	Inhalable fraction.
Constituents	Type	Value	Form
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)	TWA	5 mg/m3	Inhalable fraction.
Fuel oil no. 2 (CAS 68476-30-2)	TWA	100 mg/m3	Inhalable fraction and vapor.
Hydrogen sulphide (CAS 7783-06-4)	STEL	5 ppm	
	TWA	1 ppm	

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

Components	Type	Value	Form
Fuel oil no. 6 (CAS 68553-00-4)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Constituents	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	
		400 ppm	
Fuel oil no. 2 (CAS 68476-30-2)	TWA	100 mg/m3	
Hydrogen sulphide (CAS 7783-06-4)	Ceiling	21 mg/m3	
		15 ppm	
	TWA	14 mg/m3	
		10 ppm	

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

Components	Type	Value	Form
Fuel oil no. 6 (CAS 68553-00-4)	TWA	1 mg/m3	Mist.
Constituents	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.
Fuel oil no. 2 (CAS 68476-30-2)	TWA	100 mg/m3	Vapour and aerosol.
Hydrogen sulphide (CAS 7783-06-4)	Ceiling	10 ppm	

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

Constituents	Type	Value	Form
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)	TWA	5 mg/m3	Inhalable fraction.
Fuel oil no. 2 (CAS 68476-30-2)	TWA	100 mg/m3	Inhalable fraction and vapor.
Hydrogen sulphide (CAS 7783-06-4)	STEL	5 ppm	
	TWA	1 ppm	

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

Components	Type	Value	Form
Fuel oil no. 6 (CAS 68553-00-4)	TWA	5 mg/m3	Inhalable fraction.
Constituents	Type	Value	Form
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)	TWA	5 mg/m3	Inhalable fraction.
Fuel oil no. 2 (CAS 68476-30-2)	TWA	100 mg/m3	Inhalable fraction and vapor.
Hydrogen sulphide (CAS 7783-06-4)	STEL	15 ppm	
	TWA	10 ppm	

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Constituents	Type	Value	Form
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.
Distillates (petroleum), intermediate catalytic cracked (CAS 64741-60-2)	TWA	1590 mg/m ³	
		400 ppm	
Hydrogen sulphide (CAS 7783-06-4)	STEL	21 mg/m ³	
		15 ppm	
	TWA	14 mg/m ³ 10 ppm	

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines**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 - Saskatchewan OELs: Skin designation

Fuel oil no. 2 (CAS 68476-30-2) 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

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

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

Wear NIOSH approved respirator. Selection and use of respiratory protective equipment should be in accordance with CSA Standard Z94.4.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

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.

9. Physical and chemical properties**Appearance**

Physical state Liquid.

Form Liquid.

Colour Brown.

Odour Tar.

Odour threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point ≥60 °C Closed Cup

Evaporation rate	Not available.
Flammability (solid, gas)	Combustible.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	< 0.67 kPa
Vapour density	5
Relative density	0.98 (H ₂ O = 1)
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	> 400 °C (> 752 °F)
Decomposition temperature	Not available.
Viscosity	120 - 180 cSt (50°C)
Other information	
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

10. Stability and reactivity

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

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation.
Skin contact	Causes skin irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Dizziness. Skin irritation. May cause redness and pain. Jaundice. Prolonged exposure may cause chronic effects.

Information on toxicological effects

Acute toxicity Harmful if inhaled.

Components	Species	Test Results
Fuel oil no. 6 (CAS 68553-00-4)		
Acute		
Inhalation		
LC50	Rat	4.6 - 7.64 mg/l, 4 hours

Constituents	Species	Test Results
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)		
Acute		
Inhalation		
<i>Aerosol</i>		
LC50	Rat	> 320 mg/m3, 4 Hours
Distillates (petroleum), intermediate catalytic cracked (CAS 64741-60-2)		
Acute		
Inhalation		
<i>Aerosol</i>		
LC50	Rat	> 3.19 mg/l, 4 Hours
Hydrogen sulphide (CAS 7783-06-4)		
Acute		
Inhalation		
LC50	Rat	> 0.38 mg/l, 960 Minutes
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Respiratory or skin sensitisation		
Respiratory sensitisation	Not a respiratory sensitiser.	
Skin sensitisation	This product is not expected to cause skin sensitisation.	
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.	
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.	
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.	
Fuel oil no. 2 (CAS 68476-30-2)	Confirmed animal carcinogen with unknown relevance to humans.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)	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.	
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, bone marrow, liver, thymus) through prolonged or repeated exposure.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.	

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Constituents	Species	Test Results	
Clarified oils (petroleum), catalytic cracked (CAS 64741-62-4)			
Aquatic			
<i>Chronic</i>			
Fish	NOAEL	Oncorhynchus mykiss	0.1 mg/l, 28 days
Distillates (petroleum), intermediate catalytic cracked (CAS 64741-60-2)			
Aquatic			
<i>Chronic</i>			
Fish	NOAEL	Oncorhynchus mykiss	0.029 mg/l, 14 days
Residues (petroleum), topping plant, low-sulphur (CAS 68607-30-7)			
Aquatic			
Fish	LC50	Fish	48 mg/l, 48 Hours
Hydrogen sulphide (CAS 7783-06-4)			
Aquatic			
Fish	LC50	Lake whitefish (Coregonus clupeaformis)	0.002 mg/l, 96 hours

Persistence and degradability No data available.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

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 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	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Distillates (petroleum), intermediate catalytic cracked; Clarified oils, petroleum, catalytic cracked)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Distillates (petroleum), intermediate catalytic cracked; Clarified oils, petroleum, catalytic cracked)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III

Environmental hazards Yes
ERG Code 9L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Distillates (petroleum), intermediate catalytic cracked; Clarified oils, petroleum, catalytic cracked)

Transport hazard class(es)

Class 9

Subsidiary risk -

Packing group III

Environmental hazards

Marine pollutant Yes

EmS F-A, S-F

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

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

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.

Precursor Control Regulations

Not regulated.

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)	Yes
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)	Yes
New Zealand	New Zealand Inventory	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
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 14-March-2018

Revision date -

Version No. 01

Disclaimer The information given is based on data available for the material, the components of the material, and similar materials. 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.