

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022
Issue date: 2025-04-16 Revision date: 2025-04-16 Version: 1.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : NO. 4 FUEL OIL; LVGO

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of substance/mixture : High BTU, low viscosity, heavy residual fuel.

1.4. Supplier's details

Manufacturer

Kildair Service ULC
1000, Montée des Pionniers, bureau 110
Terrebonne, Québec, J6V 1S8 - Canada
T 450 756-8091

Distributor

Add the name, address and tel. number of the US manufacturer or importer who operates in the US

1.5. Emergency phone number

Emergency number : 450 746-0999 ext. 300; 1-800-465-0994 ext. 300 (24/7)

SECTION 2 Hazard identification

2.1. Classification of the substance or mixture

GHS classification

Flammable liquids, Category 4
Acute toxicity (inhalation:vapour), Category 4
Skin corrosion/irritation, Category 2
Serious eye damage/eye irritation, Category 2A
Skin sensitization, Category 1B
Germ cell mutagenicity, Category 2
Carcinogenicity, Category 1B
Specific target organ toxicity, Repeated exposure, Category 2
Aspiration hazard, Category 1

2.2. Label elements

GHS labelling

Hazard pictograms (GHS) :



Signal word (GHS) :

Danger

Hazard statements (GHS) :

Combustible liquid
May be fatal if swallowed and enters airways
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
Harmful if inhaled
Suspected of causing genetic defects.

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

Precautionary statements (GHS)	<p>May cause cancer.</p> <p>May cause damage to organs (liver, spleen, bone marrow) through prolonged or repeated exposure</p> <p>: Obtain special instructions before use.</p> <p>Do not handle until all safety precautions have been read and understood.</p> <p>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>Do not breathe dust, fume, gas, mist, vapours, spray.</p> <p>Wash hands, forearms and face thoroughly after handling.</p> <p>Use only outdoors or in a well-ventilated area.</p> <p>Contaminated work clothing must not be allowed out of the workplace.</p> <p>Wear protective gloves</p> <p>If swallowed: Immediately call a poison center or doctor.</p> <p>Do NOT induce vomiting.</p> <p>If on skin: Wash with plenty of water.</p> <p>Take off contaminated clothing and wash it before reuse.</p> <p>If skin irritation or rash occurs: Get medical advice or attention.</p> <p>If inhaled: Remove person to fresh air and keep comfortable for breathing.</p> <p>Call a poison center or doctor if you feel unwell.</p> <p>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>If eye irritation persists: Get medical advice or attention.</p> <p>If exposed or concerned: Get medical advice/attention.</p> <p>Get medical advice or attention if you feel unwell.</p> <p>Store in a well-ventilated place.</p> <p>Store locked up.</p> <p>Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.</p>
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2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

20% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%Weight
Lubricating oils, used, vacuum distilled	Lubricating oils, used, vacuum distilled Lubricating oils, used, vacuum distilled (A complex combination of hydrocarbons obtained by the vacuum distillation of used lubricating oil and boiling in the range of approximately 200-360°C (392-680°F).)	CAS-No.: 92045-41-5	80 – 100

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

Name	Chemical name / Synonyms	Product identifier	%Weight
Fuel oil, residual	Fuel oil, residual Residual fuel oil / Fuel oil, residual (The liquid product from various refinery streams, usually residues. The composition is complex and varies with the source of the crude oil.) / Bunker-C	CAS-No.: 68476-33-5	60 – 80
Distillates, petroleum, straight-run middle	Distillates, petroleum, straight-run middle Distillates (petroleum), straight-run middle / Distillates, petroleum, straight run middle / Diesel fuel / Distillates, petroleum, straight-run middle (A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C11-20 and boiling in the range of 205-345°C.) / Petroleum distillate straight-run middle / Gas oil, diesel fuel / Calumet 300-360 solvent / Light oil / Gasoil / Gas oil, blend / Gas oil	CAS-No.: 64741-44-2	10 – 30
Distillates, petroleum, heavy straight-run	Distillates, petroleum, heavy straight-run Distillates, petroleum, heavy straight run / Distillates (petroleum), heavy straight-run / Distillates (petroleum) heavy straight-run / Distillates, petroleum, heavy straight-run (A complex combination of hydrocarbons products by the atmospheric distillation of crude oil. It boils in the range of approximately 288-471°C.)	CAS-No.: 68915-96-8	10 – 30

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

Name	Chemical name / Synonyms	Product identifier	%Weight
Distillates, petroleum, light catalytic cracked	<p>Distillates, petroleum, light catalytic cracked</p> <p>Petroleum distillates, light catalytic cracked / Distillates (petroleum), light catalytic cracked / Distillates (petroleum), light catalytic cracked;</p> <p>Cracked gasoil [A complex combination of hydrocarbons produced by the distillation of products from a catalytic cracking process. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C25 and boiling in the range of approximately 150°C to 400°C (302°F to 752°F). It contains a relatively large proportion of bicyclic aromatic hydrocarbons.] / Distillates, petroleum, light catalytic cracked (A complex combination of hydrocarbons produced by the distillation of products from a catalytic cracking process. It consists of hydrocarbons having carbon numbers predominantly in the range of C9-25 and boiling in the range of approximately 150-400°C. It contains a relatively large proportion of bicyclic aromatic hydrocarbons.) / Distillates (petroleum), light catalytic cracked - cracked gas oil</p>	CAS-No.: 64741-59-9	10 – 30

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

Name	Chemical name / Synonyms	Product identifier	%Weight
Clarified oils, petroleum, catalytic cracked	Clarified oils, petroleum, catalytic cracked Clarified oils (petroleum), catalytic cracked / Clarified slurry oil / Clarified oils (petroleum), catalytic cracked - heavy fuel oil / Slurry oil, clarified / Clarified oils, petroleum, catalytic cracked (A complex combination of hydrocarbons produced as the residual fraction from distillation of the products from a catalytic cracking process. It consists of hydrocarbons having carbon numbers predominantly >C20 and boiling above approximately 350°C. This stream is likely to contain 5 wt. % or more of 4-6-membered condensed ring aromatic hydrocarbons.) / Syntower bottoms / Catalytic cracked clarified oil / Clarified oils (petroleum), catalytic cracked; Heavy Fuel oil [A complex combination of hydrocarbons produced as the residual fraction from distillation of the products from a catalytic cracking process. It consists of hydrocarbons having carbon numbers predominantly greater than C20 and boiling above approximately 350°C (662°F). This stream is likely to contain 5 wt. % or more of 4-to 6-membered condensed ring aromatic hydrocarbons.]	CAS-No.: 64741-62-4	10 – 30
Sulfur	Sulfur Sulphur / Sulphur, molten / SULFUR / Brimstone / Elemental sulfur / sulfur / Elemental sulphur / Sulfur, elemental	CAS-No.: 7704-34-9	0.1 – 1

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a POISON CENTER/doctor if you feel unwell.
First-aid measures after skin contact	: IF ON SKIN: Wash with plenty of Water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

First-aid measures after ingestion : IF SWALLOWED: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : Harmful if inhaled. May cause irritation to the respiratory tract.
Symptoms/effects after skin contact : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/effects after ingestion : May be fatal if swallowed and enters airways. May result in aspiration into the lungs, causing chemical pneumonia. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic symptoms : Suspected of causing genetic defects. May cause cancer. May cause damage to organs through prolonged or repeated exposure.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.
Unsuitable extinguishing media : Do not use water jet.

5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid. Products of combustion may include, and are not limited to: oxides of carbon. Vapours may be heavier than air and may travel along the ground to a distant ignition source and flash back. . Nitrogen oxides. Oxides of sulfur. hydrogen sulphide, hydrogen sulfide. Irritating vapours.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Move containers away from the fire area if this can be done without risk. Cool closed containers exposed to fire with water spray.
Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Use special care to avoid static electric charges.

For non-emergency personnel

No additional information available

For emergency responders

Environmental precautions : Prevent entry to sewers and public waters.

6.2. Methods and materials for containment and cleaning up

For containment : Stop leak if safe to do so. Remove ignition sources. Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment.

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from sources of ignition - No smoking. Avoid contact with skin and eyes. Do not breathe dust, fume, gas, mist, spray, vapours. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Do not breathe gas, fumes, vapour or spray.

Hygiene measures : Wash contaminated clothing before reuse. Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Always wash hands after handling the product. Wash hands, forearms and face thoroughly after handling.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Keep cool. Store locked up.

Specific end uses : Not available.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Hand protection:
Wear suitable gloves resistant to chemical penetration. Consult glove manufacturer's product information on material suitability and material thickness.
Eye protection:
Wear eye/face protection
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment. 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. SDSs cannot provide detailed and complete respiratory protection guidelines. Selection of respiratory protection must be done by a qualified person who has assessed the work environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: Viscous.
Colour	: Black
Odour	: petroleum
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 250 – 550 °C / 482 - 1022 °F
Flash point	: > 61 °C / > 141. 8 °F (closed cup, Pensky-Martens)
Relative evaporation rate (butylacetate=1)	: < 1
Flammability (solid, gas)	: Combustible
Vapour pressure	: < 1 kPa (<7.5006 mm Hg) [room temperature]
Relative vapour density at 20°C/ 68 °F	: > 1 [Air=1]
Relative density	: 0.9 – 1.01 @ 15.5°C /60°F
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: > 300 °C / >572 °F
Decomposition temperature	: No data available
Viscosity, kinematic	: 5.5 – 24 mm ² /s / 0.055 - 0.24 cm ² /s @40 °C /104 °F
Explosive limits	: No data available
Particle characteristics	: No data available

Lubricating oils, used, vacuum distilled

Boiling point	(>340 - <550 °C - at 1013.25 hPa)
Flash point	(>158 - <241 °C - closed cup)

Fuel oil, residual

Boiling point	202 – 511 °C (at 1013 hPa)
Flash point	> 60 °C (closed cup)
Vapour pressure	> 5 hPa (at 20 °C)

Distillates, petroleum, straight-run middle

Boiling point	150 – 399 °C Atm. press.: 101,3 kPa Remarks on result: 'other:'
Flash point	> 56 °C Atm. press.: 101,325 kPa Remarks on result: 'other:'
Vapour pressure	0.4 kPa Temp.: 40 °C

Distillates, petroleum, heavy straight-run

Boiling point	150 – 399 °C Atm. press.: 101,3 kPa Remarks on result: 'other:'
Flash point	> 56 °C Atm. press.: 101,325 kPa Remarks on result: 'other:'
Vapour pressure	0.4 kPa Temp.: 40 °C

Distillates, petroleum, light catalytic cracked

Boiling point	150 – 411 °C (at 1013 hPa)
Flash point	56 – 154 °C

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

Distillates, petroleum, light catalytic cracked	
Vapour pressure	4 hPa (at 40 °C)

Clarified oils, petroleum, catalytic cracked	
Boiling point	202 – 511 °C Atm. press.: 1013 hPa
Flash point	64 – 310 °C Atm. press.: 101,325 kPa Remarks on result: 'other:'
Vapour pressure	> 5 hPa (at 20 °C)
Particle characteristics	No data available

Sulfur	
Boiling point	444.61 °C
Flash point	207 °C
Auto-ignition temperature	232 °C
Vapour pressure	0 Pa (at 20 °C)
Particle characteristics	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Sources of ignition. Incompatible materials.

10.5. Incompatible materials

Strong oxidizers. Strong acids. Strong bases.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. May release flammable gases. Sulphur dioxide. Phosphorus oxides. Nitrogen oxides. Irritating vapours.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified.
Acute toxicity (dermal) : Not classified.

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

Acute toxicity (inhalation) : Inhalation:vapour: Harmful if inhaled.

NO. 4 FUEL OIL; LVGO	
Unknown acute toxicity	20% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))
Lubricating oils, used, vacuum distilled (92045-41-5)	
LD50 oral rat	> 2000 mg/kg (Source: IUCLID)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 4480 mg/kg (Source: NLM_CIP)
Fuel oil, residual (68476-33-5)	
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 434 (Acute Dermal Toxicity - Fixed Dose Procedure)
LC50 inhalation rat	4.1 mg/l/4h
Distillates, petroleum, straight-run middle (64741-44-2)	
LD50 oral rat	> 5000 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 inhalation rat	> 2.53 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
Distillates, petroleum, heavy straight-run (68915-96-8)	
LD50 oral rat	5000 mg/kg (Source: IUCLID)
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 inhalation rat	> 2.53 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
Distillates, petroleum, light catalytic cracked (64741-59-9)	
LD50 oral rat	6790 – 7180 mg/kg (Source: EPA_HP.V)
LD50 dermal rabbit	> 2000 mg/kg (Source: EPA_HP.V)
LC50 inhalation rat	5.4 g/l (Exposure time: 4 h Source: EPA_HP.V)
Clarified oils, petroleum, catalytic cracked (64741-62-4)	
LD50 oral rat	4320 – 5270 mg/kg (Source: EPA_HP.V)
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 434 (Acute Dermal Toxicity - Fixed Dose Procedure)
LC50 inhalation rat	> 3700 mg/m ³ (Exposure time: 4 h Source: EPA_HP.V)
Sulfur (7704-34-9)	
LD50 oral rat	> 3000 mg/kg (Source: IUCLID)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 2000 mg/kg (Source: IUCLID)
LC50 inhalation rat	> 9.23 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
Based on test data. Species: Rabbit - Exposure 500 mg

Serious eye damage/irritation : Causes serious eye irritation.

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Suspected of causing genetic defects.
Carcinogenicity : May cause cancer.

Sulfur (7704-34-9)	
NOAEL (chronic, oral, animal/male, 2 years)	256 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
NOAEL (chronic, oral, animal/female, 2 years)	284 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity : Not classified.

Distillates, petroleum, straight-run middle (64741-44-2)	
NOAEL (animal/male, F0/P)	≥ 3000 mg/kg bodyweight Animal: rat, Animal sex: male
Distillates, petroleum, heavy straight-run (68915-96-8)	
NOAEL (animal/male, F0/P)	≥ 3000 mg/kg bodyweight Animal: rat, Animal sex: male
Distillates, petroleum, light catalytic cracked (64741-59-9)	
LOAEL (animal/female, F0/P)	1 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)
NOAEL (animal/female, F0/P)	≥ 250 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)
NOAEL (animal/female, F1)	50 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

STOT-single exposure : Not classified.
STOT-repeated exposure : May cause damage to organs (liver, spleen, bone marrow) through prolonged or repeated exposure.

Distillates, petroleum, straight-run middle (64741-44-2)	
STOT-repeated exposure	May cause damage to organs (liver, spleen, bone marrow) through prolonged or repeated exposure.
Distillates, petroleum, heavy straight-run (68915-96-8)	
STOT-repeated exposure	May cause damage to organs (liver, spleen, bone marrow) through prolonged or repeated exposure.
Distillates, petroleum, light catalytic cracked (64741-59-9)	
NOAEL (dermal, rat/rabbit, 90 days)	500 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

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

NO. 4 FUEL OIL; LVGO	
Viscosity, kinematic	5.5 – 24 mm ² /s / 0.055 - 0.24 cm ² /s @40 °C /104 °F
Lubricating oils, used, vacuum distilled (92045-41-5)	
Viscosity, kinematic	13.6 – 119.6 mm ² /s Temp.: '40°C' Parameter: 'kinematic viscosity (in mm ² /s)'

Fuel oil, residual (68476-33-5)	
Viscosity, kinematic	6 – 55 mm ² /s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm ² /s)'

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

Distillates, petroleum, straight-run middle (64741-44-2)	
Viscosity, kinematic	No data available

Distillates, petroleum, heavy straight-run (68915-96-8)	
Viscosity, kinematic	No data available

Distillates, petroleum, light catalytic cracked (64741-59-9)	
Viscosity, kinematic	1.1 – 4.5 mm ² /s Temp.: '40°C' Parameter: 'kinematic viscosity (in mm ² /s)'

Clarified oils, petroleum, catalytic cracked (64741-62-4)	
Viscosity, kinematic	6 – 55 mm ² /s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm ² /s)'

Sulfur (7704-34-9)	
Viscosity, kinematic	No data available

Symptoms/effects after inhalation	: Harmful if inhaled. May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways. May result in aspiration into the lungs, causing chemical pneumonia. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic symptoms	: Suspected of causing genetic defects. May cause cancer. May cause damage to organs through prolonged or repeated exposure.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general	: May cause long-term adverse effects in the aquatic environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified.
Hazardous to the aquatic environment, long-term (chronic)	: Not classified.

Lubricating oils, used, vacuum distilled (92045-41-5)	
LC50 - Fish [1]	79.6 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static] Source: IUCLID)
LC50 - Fish [2]	3.2 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static] Source: IUCLID)

Fuel oil, residual (68476-33-5)	
LC50 - Fish [1]	35 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: IUCLID)
LC50 - Fish [2]	48 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static] Source: IUCLID)

Distillates, petroleum, light catalytic cracked (64741-59-9)	
LC50 - Fish [1]	7.3 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static] Source: IUCLID)

Clarified oils, petroleum, catalytic cracked (64741-62-4)	
LC50 - Fish [1]	48 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static] Source: IUCLID)

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

Sulfur (7704-34-9)	
LC50 - Fish [1]	866 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static] Source: IUCLID)
EC50 - Crustacea [1]	169 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	121.7 mg/l Test organisms (species): other:
LC50 - Fish [2]	< 14 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: EPA)
NOEC (chronic)	> 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	9.3 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '28 d'

12.2. Persistence and degradability

NO. 4 FUEL OIL; LVGO	
Persistence and degradability	Not established.
Lubricating oils, used, vacuum distilled (92045-41-5)	
Persistence and degradability	Rapidly degradable
Fuel oil, residual (68476-33-5)	
Persistence and degradability	Rapidly degradable
Distillates, petroleum, straight-run middle (64741-44-2)	
Persistence and degradability	Rapidly degradable
Distillates, petroleum, heavy straight-run (68915-96-8)	
Persistence and degradability	Rapidly degradable
Distillates, petroleum, light catalytic cracked (64741-59-9)	
Persistence and degradability	Rapidly degradable
Clarified oils, petroleum, catalytic cracked (64741-62-4)	
Persistence and degradability	Rapidly degradable
Sulfur (7704-34-9)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

NO. 4 FUEL OIL; LVGO	
Bioaccumulative potential	Not established.
Lubricating oils, used, vacuum distilled (92045-41-5)	
Partition coefficient n-octanol/water	4 (at 20 °C (at pH 6.5)
Distillates, petroleum, straight-run middle (64741-44-2)	
Partition coefficient n-octanol/water	3.9 – 6

12.4. Mobility in soil

No additional information available

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

12.5. Other adverse effects

Ozone : Not classified.
Fluorinated greenhouse gases : No
Other information : No other effects known.

SECTION 13 Disposal considerations

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14 Transport information

In accordance with DOT / TDG
Product is regulated as combustible liquid (NA1993) only when shipped in bulk, and unregulated if shipped in smaller containers.

14.1. UN Number

UN-No. (DOT) : NA1993
UN-No. (TDG) : Not regulated

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Combustible liquid, n.o.s. (petroleum distillates)
Proper Shipping Name (TDG) : Not regulated

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Combustible liquid

TDG
Transport hazard class(es) (TDG) : Not regulated

14.4. Packing group

Packing group (DOT) : III
Packing group (TDG) : Not regulated

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

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

DOT
UN-No. (DOT) : NA1993

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

DOT Special Provisions (49 CFR 172.102)	: 148 - For domestic transportation, this entry directs to § 173.66 for: a. The standards for transporting a single bulk hazardous material for blasting by cargo tank motor vehicles (CTMV); and b. The standards for CTMVs capable of transporting multiple hazardous materials for blasting in bulk and non-bulk packagings (i.e, a multipurpose bulk truck (MBT)). IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

TDG

Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

15.2. International regulations

No additional information available

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other Information

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

Revision date	: 2025-04-16
Issue date	: 2025-04-16
Other information	: None.
Prepared by	: Nexreg Compliance Inc. www.Nexreg.com



SDS HazCom 2024 - WHMIS 2022 (Nexreg) 2025

NO. 4 FUEL OIL; LVGO

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

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