

DURON 10W-30, 15W-40 ENGINE OIL

Page Number: 2

Section 6. Accidental Release Measures

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| Material Release or Spill | NAERG96, GUIDE 171, Substances (low to moderate hazard). ELIMINATE ALL IGNITION SOURCES. Avoid contact. Stop leak if without risk. Contain spill. Absorb with inert absorbents, dry clay, or diatomaceous earth. Avoid inhaling dust of diatomaceous earth for it may contain silica in very fine particle size, making this a potential respiratory hazard. Place used absorbent in closed metal containers for later disposal or burn absorbent in a suitable combustion chamber. DO NOT FLUSH TO SEWERS, STREAMS OR OTHER BODIES OF WATER. Check with applicable jurisdiction for specific disposal requirements of spilled material and empty containers. Notify the appropriate authorities immediately. |
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Section 7. Handling and Storage

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| Handling | Keep away from sources of ignition. DO NOT reuse empty containers without commercial cleaning or reconditioning. Avoid inhalation and skin contact especially when handling used oil. Practice good personal hygiene. Wash hands after handling and before eating. Launder work clothes frequently. Discard saturated leather goods. |
| Storage | Store in tightly closed containers in cool, dry, isolated, well-ventilated area, and away from incompatibles. |

Section 8. Exposure Controls/Personal Protection

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| Engineering Controls | For normal application, special ventilation is not necessary. If user's operations generate vapours or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Make-up air should always be supplied to balance air removed by exhaust ventilation. Ensure that eyewash station and safety shower are close to work station. |
| Personal Protection - | <i>The selection of personal protective equipment varies, depending upon conditions of use.</i> |
| Eyes | Eye protection (i.e., safety glasses, safety goggles and/or face shield) should be determined based on conditions of use. If product is used in an application where splashing may occur, the use of safety goggles and/or a face shield should be considered. |
| Body | Wear appropriate clothing to prevent skin contact. As a minimum long sleeves and trousers should be worn. |
| Respiratory | Where concentrations in air may exceed the occupational exposure limits given in Section 2 (and those applicable to your area) and where engineering, work practices or other means of exposure reduction are not adequate, NIOSH approved respirators may be necessary to prevent overexposure by inhalation. |
| Hands | Wear appropriate chemically protective gloves. When handling hot product ensure gloves are heat resistant and insulated. |
| Feet | Wear appropriate footwear to prevent product from coming in contact with feet and skin. |

Section 9. Physical and Chemical Properties

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| Physical State and Appearance | Viscous liquid. | Viscosity | 10W-30: 72.25 cSt @ 40°C (104°F) 15W-40: 112.3 cSt @ 40°C (104°F) |
| Colour | Light amber. | Pour Point | ≤-27°C |
| Odour | Mild petroleum oil like. | Softening Point | Not applicable. |
| Odour Threshold | Not available. | Dropping Point | Not applicable. |
| Boiling Point | Not available. | Penetration | Not applicable. |
| Density | 0.862 - 0.8689 kg/L @ 15°C (59°F). | Oil / Water Dist. Coefficient | Not measurable. The product is more soluble in oil. |
| Vapour Density | Not available. | Ionicity (in water) | Insoluble in water. |
| Vapour Pressure | Negligible at ambient temperature and pressure. | Dispersion Properties | Nonvolatile and immobile. |
| Volatility | Non-volatile | Solubility | Insoluble in water, soluble in non-polar hydrocarbon solvents. |

Section 10. Stability and Reactivity

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|---|---|--------------------------|--|
| Corrosivity | Copper corrosion, 3h, 100°C (ASTM D0130): 1b | | |
| Stability | The product is stable under normal handling and storage conditions. | Hazardous Polymerization | Will not occur under normal working conditions. |
| Incompatible Substances / Conditions to Avoid | Reactive with oxidizing agents, acids, halogens. | Decomposition Products | May release COx, NOx, SOx, H2S, SiO2, Alkyl mercaptans, Sulfides, Aldehydes, Methacrylate monomers, smoke and irritating vapours when heated to decomposition. |

Section 11. Toxicological Information

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|--------------------------------|---|--|--|
| Routes of Entry | Skin contact, eye contact, inhalation, and ingestion. | | |
| Acute Lethality | Based on toxicity of base oils: acute oral toxicity (LD50): >5000 mg/kg (rat) acute dermal toxicity (LD50): >2000 mg/kg (rabbit) acute inhalation toxicity (LC50): >2300 mg/m³/4h (rat) | | |
| Chronic or Other Toxic Effects | | | |
| Dermal Route: | Prolonged or repeated contact may cause skin irritation characterized by dermatitis or oil acne. | | |
| Inhalation Route: | Negligible breathing hazard at normal temperatures (up to 35°C) or recommended blending temperatures. Elevated temperatures or mechanical action may form vapours, mists or fumes. Inhalation of oil mists or vapours from hot oil may cause irritation of the upper respiratory tract. | | |
| Oral Route: | Relatively non-toxic via ingestion. | | |

REGULAR SULPHUR DIESEL FUEL

322-110

Revision Number: 5



Shell Canada Limited

Material Safety Data Sheet

Effective Date: 2002-11-06

Supersedes: 2002-08-14



Class B3 Combustible Class D2B Other Toxic
Liquid Effects - Skin Irritant

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: REGULAR SULPHUR DIESEL FUEL
SYNONYMS: Diesel
Automotive Gas Oil
PRODUCT USE: Fuel Solvent
MSDS Number: 322-110

MANUFACTURER
Shell Canada Limited
P.O. Box 100, Station M
400-4th Ave. S.W.
Calgary, AB Canada
T2P 2H5

TELEPHONE NUMBERS
Shell Emergency Number 1-800-661-7378
CANUTEC 24 HOUR EMERGENCY NUMBER 613-996-6666
For general information: 1-800-661-1600
For MSDS information: 403-691-3982
(From 7:30 to 4:30 Mountain Time) 403-691-2220

This MSDS was prepared by the Toxicology and Product Stewardship Section of Shell Canada Limited.

*An asterisk in the product name designates a trade-mark(s) of Shell Canada Limited, used under license by Shell Canada Products.

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Component Name | CAS Number | % Range | WHMIS Controlled |
|----------------------|------------|---------|------------------|
| Fuels, Diesel, No. 2 | 68476-34-6 | 100 | Yes |

See Section 8 for Occupational Exposure Guidelines.

3. HAZARDS IDENTIFICATION

Physical Description: Liquid Lightly Coloured Hydrocarbon Odour

Routes of Exposure: Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact.

Hazards:
Combustible Liquid.
Irritating to skin.
Vapours are moderately irritating to the eyes.

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Handling:

Vapours are moderately irritating to the respiratory passages. The liquid when accidentally aspirated into the lungs can cause a severe inflammation of the lung. Eliminate all ignition sources.
Avoid prolonged exposure to vapours.
Wear suitable gloves and eye protection.
Bond and ground transfer containers and equipment to avoid static accumulation.
Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and open flames.

For further information on health effects, see Section 11.

4. FIRST AID

Eyes: Flush eyes with water for at least 15 minutes while holding eyelids open. If irritation occurs and persists, obtain medical attention.

Skin: Wash contaminated skin with mild soap and water for 15 minutes. If irritation occurs and persists, obtain medical attention.

Ingestion: DO NOT INDUCE VOMITING! OBTAIN MEDICAL ATTENTION IMMEDIATELY. Guard against aspiration into lungs by having the individual turn on to their left side. If vomiting occurs spontaneously keep head below hips to prevent aspiration of liquid into the lungs. Do not give anything by mouth to an unconscious person.

Inhalation: Remove victim from further exposure and restore breathing, if required. Obtain medical attention.

Notes to Physician: The main hazard following accidental ingestion is aspiration of the liquid into the lungs producing chemical pneumonitis. If more than 2.0 mL/kg has been ingested, vomiting should be induced with supervision. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Dry Chemical
Carbon Dioxide
Foam
Water Fog

Firefighting Instructions: Caution - Combustible. Vapour forms a flammable/explosive mixture with air between upper and lower flammable limits. Vapours may travel along ground and flashback along vapour trail may occur. Product will float and can be reignited on surface of water. Do not use water except as a fog. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure buildup which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus.

Hazardous Combustion Products: A complex mixture of airborne solid, liquid, particulates and gases will evolve when this material undergoes pyrolysis or combustion. Carbon dioxide, carbon monoxide and unidentified organic compounds may be formed upon combustion.

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6. ACCIDENTAL RELEASE MEASURES

Issue warning "Combustible". Eliminate all ignition sources. Isolate hazard area and restrict access. Handling equipment must be grounded. Try to work upwind of spill. Avoid direct contact with material. Wear appropriate breathing apparatus (if applicable) and protective clothing. Stop leak only if safe to do so. Dike and contain land spills; contain water spills by booming. Use water fog to knock down vapours; contain runoff. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal. Recommended materials: Clay or Sand Flush area with water to remove trace residue. Dispose of recovered material as noted under Disposal Considerations. Notify appropriate environmental agency(ies).

7. HANDLING AND STORAGE

Handling: Combustible. Avoid excessive heat, sparks, open flames and all other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Vapours are heavier than air and will settle and collect in low areas and pits, displacing breathing air. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapours are gone. Vapours may accumulate and travel to distant ignition sources and flashback. Do not cut, drill, grind, weld or perform similar operations on or near containers. Empty containers are hazardous, may contain flammable/explosive dusts, residues or vapours. Do not pressurize drum containers to empty them. Wash with soap and water prior to eating, drinking, smoking, applying cosmetics or using toilet facilities. Launder contaminated clothing prior to reuse. Use good personal hygiene.

Storage: Store in a cool, dry, well ventilated area, away from heat and ignition sources. Keep container tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

THE FOLLOWING INFORMATION, WHILE APPROPRIATE FOR THIS PRODUCT, IS GENERAL IN NATURE. THE SELECTION OF PERSONAL PROTECTIVE EQUIPMENT WILL VARY DEPENDING ON THE CONDITIONS OF USE.

OCCUPATIONAL EXPOSURE LIMITS (Current ACGIH TLV/TWA unless otherwise noted):

North American exposure limits have not been established for the product. Consult local authorities for acceptable provincial values.

Diesel fuel, as total hydrocarbons: 100 mg/m³

Mechanical Ventilation: Concentrations in air should be maintained below lower explosive limit at all times or below the recommended threshold limit value if unprotected personnel are involved. Make up air should always be supplied to balance air exhausted (either generally or locally). For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes. Provide an eyewash station in the area.

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- Skin Protection:** Impervious gloves (viton, nitrile) should be worn at all times when handling this material. In confined spaces or where the risk of skin exposure is much higher, impervious clothing should be worn. Safety showers should be available for emergency use.
- Respiratory Protection:** If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. Use a NIOSH-approved chemical cartridge respirator with organic vapour cartridges or use a NIOSH-approved supplied-air respirator. For high airborne concentrations, use a NIOSH-approved supplied-air respirator, either self-contained or airline breathing apparatus, operated in positive pressure mode.

9. PHYSICAL DATA

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|---|--|
| Physical State: | Liquid |
| Appearance: | Lightly Coloured |
| Odour: | Hydrocarbon Odour |
| Odour Threshold: | Not available |
| Freezing/Pour Point: | Not available |
| Boiling Point: | 150 - 380 degrees C |
| Density: | <876 kg/m3 @ 15 degrees C |
| Vapour Density (Air = 1): | Not available |
| Vapour Pressure (absolute): | Not available |
| pH: | Not applicable |
| Flash Point: | Method Pensky-Martens CC >40 degrees C |
| Lower Explosion Limit: | 1 % (vol.) |
| Upper Explosion Limit: | 6 % (vol.) |
| Autoignition Temperature: | 250 degrees C |
| Viscosity: | 1.3 - 4.1 cSt @ 40 degrees C |
| Evaporation Rate (n-BuAc = 1): | Not available |
| Partition Coefficient (K _{ow}): | Not available |
| Water Solubility: | Insoluble |
| Other Solvents: | Hydrocarbon Solvents |
| Formula: | C10 to C22 Hydrocarbons |

10. STABILITY AND REACTIVITY

| | |
|-----------------------------------|---|
| Chemically Stable: | Yes |
| Hazardous Polymerization: | No |
| Sensitive to Mechanical Impact: | No |
| Sensitive to Static Discharge: | Yes |
| Hazardous Decomposition Products: | Thermal decomposition products are highly dependent on combustion conditions. |
| Incompatible Materials: | Avoid strong oxidizing agents. |
| Conditions of Reactivity: | Avoid excessive heat, open flames and all ignition sources. |

11. TOXICOLOGICAL INFORMATION

| Ingredient (or Product if not specified) | Toxicological Data |
|--|---|
| Fuels, Diesel, No. 2 | LD50 Oral Rat >5000 mg/kg LD50 Dermal Rabbit >2000 mg/kg |

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| | |
|--|---|
| Routes of Exposure: | Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact. |
| Irritancy: | This product is expected to be irritating to skin but is not predicted to be a skin sensitizer. |
| Chronic Effects: | Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis. Prolonged exposure to high vapour concentration can cause headache, dizziness, nausea, blurred vision and central nervous system depression. |
| Pre-existing Conditions: | Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product. |
| Carcinogenicity and Mutagenicity: | The International Agency for Research on Cancer (IARC) considers that this product is not classifiable as to its carcinogenicity to humans. Middle distillates have caused skin cancers in laboratory animals when applied repeatedly and left in place between applications. This effect is believed to be caused by the continuous irritation of the skin. Good personal hygiene should be maintained to avoid this risk. The American Conference of Governmental Industrial Hygienists (ACGIH) has classified this product as A3 - confirmed animal carcinogen with unknown relevance to humans. |

12. ECOLOGICAL INFORMATION

| | |
|-------------------------------|---|
| Environmental Effects: | Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. Provincial regulations require and federal regulations may require that environmental and/or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities. May cause physical fouling of aquatic organisms. |
| Biodegradability: | Not readily biodegradable. Potential for bioaccumulation. |

13. DISPOSAL CONSIDERATIONS

Waste management priorities (depending on volumes and concentration of waste) are: 1. recycle (reprocess), 2. energy recovery (cement kilns, thermal power generation), 3. incineration, 4. disposal at a licenced waste disposal facility. Do not attempt to combust waste on-site. Incinerate at a licenced waste disposal site with approval of environmental authority.

14. TRANSPORTATION INFORMATION**Canadian Road and Rail Shipping Classification:**

| | |
|----------------------|-----------------------------------|
| UN Number | UN1202 |
| Proper Shipping Name | DIESEL FUEL |
| Hazard Class | Class 3 Flammable Liquids |
| Packing Group | PG III |
| Shipping Description | DIESEL FUEL Class 3 UN1202 PG III |

15. REGULATORY INFORMATION

REGULAR SULPHUR DIESEL FUEL

322-110

Revision Number: 5

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Class: Class B3 Combustible Liquid
Class D2B Other Toxic Effects - Skin Irritant

DSL/NDSL Status: This product, or all components, are listed on the Domestic Substances List, as required under the Canadian Environmental Protection Act. This product and/or all components are listed on the U.S. EPA TSCA Inventory.

Other Regulatory Status: No Canadian federal standards.

16. ADDITIONAL INFORMATION

LABEL STATEMENTS

Hazard Statement : Combustible Liquid.
Irritating to skin.

Handling Statement: Eliminate all ignition sources.
Avoid prolonged exposure to vapours.
Wear suitable gloves and eye protection.
Bond and ground transfer containers and equipment to avoid static accumulation.
Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and open flames.

First Aid Statement : Wash contaminated skin with soap and water.
Flush eyes with water.
If overcome by vapours remove to fresh air.
Do not induce vomiting.
Obtain medical attention

Revisions: This MSDS has been reviewed and updated.
Changes have been made to:
Section 8
Section 14
Section 11

LOW SULPHUR DIESEL FUEL

320-110

Revision Number: 7

**Shell Canada Limited**
Material Safety Data Sheet

Effective Date: 2002-11-06

Supersedes: 2002-08-14

Class B3 Combustible Class D2B Other Toxic
Liquid Effects - Skin Irritant**1. PRODUCT AND COMPANY IDENTIFICATION****PRODUCT:** LOW SULPHUR DIESEL FUEL**SYNONYMS:** Diesel
Automotive Gas Oil**PRODUCT USE:** Fuel Solvent**MSDS Number:** 320-110**MANUFACTURER**Shell Canada Limited
P.O. Box 100, Station M
400-4th Ave. S.W.
Calgary, AB Canada
T2P 2H5**TELEPHONE NUMBERS****Shell Emergency Number**

1-800-661-7378

CANUTEC 24 HOUR EMERGENCY NUMBER

613-996-6666

For general information:

1-800-661-1600

For MSDS information:

403-691-3982

(From 7:30 to 4:30 Mountain Time)

403-691-2220

This MSDS was prepared by the Toxicology and Product Stewardship Section of Shell Canada Limited.

*An asterisk in the product name designates a trade-mark(s) of Shell Canada Limited, used under license by Shell Canada Products.

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Component Name | CAS Number | % Range | WHMIS Controlled |
|----------------------|------------|---------|------------------|
| Fuels, Diesel, No. 2 | 68476-34-6 | 100 | Yes |

See Section 8 for Occupational Exposure Guidelines

3. HAZARDS IDENTIFICATION**Physical Description:** Liquid Lightly Coloured Hydrocarbon Odour**Routes of Exposure:** Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact.**Hazards:**Combustible Liquid
Irritating to skin.

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Handling: Vapours are moderately irritating to the eyes.
Vapours are moderately irritating to the respiratory passages. The liquid when accidentally aspirated into the lungs can cause a severe inflammation of the lung.
Eliminate all ignition sources.
Avoid prolonged exposure to vapours.
Wear suitable gloves and eye protection.
Bond and ground transfer containers and equipment to avoid static accumulation.
Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and open flames.

For further information on health effects, see Section 11.

4. FIRST AID

Eyes: Flush eyes with water for at least 15 minutes while holding eyelids open. If irritation occurs and persists, obtain medical attention.

Skin: Wash contaminated skin with mild soap and water for 15 minutes. If irritation occurs and persists, obtain medical attention.

Ingestion: DO NOT INDUCE VOMITING! OBTAIN MEDICAL ATTENTION IMMEDIATELY. Guard against aspiration into lungs by having the individual turn on to their left side. If vomiting occurs spontaneously keep head below hips to prevent aspiration of liquid into the lungs. Do not give anything by mouth to an unconscious person.

Inhalation: Remove victim from further exposure and restore breathing, if required. Obtain medical attention.

Notes to Physician: The main hazard following accidental ingestion is aspiration of the liquid into the lungs producing chemical pneumonitis. If more than 2.0 mL/kg has been ingested, vomiting should be induced with supervision. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Dry Chemical
Carbon Dioxide
Foam
Water Fog

Firefighting Instructions: Caution - Combustible. Vapour forms a flammable/explosive mixture with air between upper and lower flammable limits. Vapours may travel along ground and flashback along vapour trail may occur. Product will float and can be reignited on surface of water. Do not use water except as a fog. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure buildup which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus.

Hazardous Combustion Products: A complex mixture of airborne solid, liquid, particulates and gases will evolve when this material undergoes pyrolysis or combustion. Carbon dioxide, carbon monoxide and unidentified organic compounds may be formed upon combustion.

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6. ACCIDENTAL RELEASE MEASURES

Issue warning "Combustible". Eliminate all ignition sources. Isolate hazard area and restrict access. Handling equipment must be grounded. Try to work upwind of spill. Avoid direct contact with material. Wear appropriate breathing apparatus (if applicable) and protective clothing. Stop leak only if safe to do so. Dike and contain land spills; contain water spills by booming. Use water fog to knock down vapours; contain runoff. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal. Recommended materials: Clay or Sand Flush area with water to remove trace residue. Dispose of recovered material as noted under Disposal Considerations. Notify appropriate environmental agency(ies).

7. HANDLING AND STORAGE

- Handling:** Combustible. Avoid excessive heat, sparks, open flames and all other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Vapours are heavier than air and will settle and collect in low areas and pits, displacing breathing air. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapours are gone. Vapours may accumulate and travel to distant ignition sources and flashback. Do not cut, drill, grind, weld or perform similar operations on or near containers. Empty containers are hazardous, may contain flammable/explosive dusts, residues or vapours. Do not pressurize drum containers to empty them. Wash with soap and water prior to eating, drinking, smoking, applying cosmetics or using toilet facilities. Launder contaminated clothing prior to reuse. Use good personal hygiene.
- Storage:** Store in a cool, dry, well ventilated area, away from heat and ignition sources. Keep container tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

THE FOLLOWING INFORMATION, WHILE APPROPRIATE FOR THIS PRODUCT, IS GENERAL IN NATURE. THE SELECTION OF PERSONAL PROTECTIVE EQUIPMENT WILL VARY DEPENDING ON THE CONDITIONS OF USE.

OCCUPATIONAL EXPOSURE LIMITS (Current ACGIH TLV/TWA unless otherwise noted):

North American exposure limits have not been established for the product. Consult local authorities for acceptable provincial values.

Diesel fuel, as total hydrocarbons: 100 mg/m³

- Mechanical Ventilation:** Concentrations in air should be maintained below lower explosive limit at all times or below the recommended threshold limit value if unprotected personnel are involved. Make up air should always be supplied to balance air exhausted (either generally or locally). For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere.

PERSONAL PROTECTIVE EQUIPMENT:

- Eye Protection:** Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes. Provide an eyewash station in the area.

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- Skin Protection:** Impervious gloves (viton, nitrile) should be worn at all times when handling this material. In confined spaces or where the risk of skin exposure is much higher, impervious clothing should be worn. Safety showers should be available for emergency use.
- Respiratory Protection:** If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. Use a NIOSH-approved chemical cartridge respirator with organic vapour cartridges or use a NIOSH-approved supplied-air respirator. For high airborne concentrations, use a NIOSH-approved supplied-air respirator, either self-contained or airline breathing apparatus, operated in positive pressure mode.

9. PHYSICAL DATA

- Physical State:** Liquid
- Appearance:** Lightly Coloured
- Odour:** Hydrocarbon Odour
- Odour Threshold:** Not available
- Freezing/Pour Point:** Not available
- Boiling Point:** 150 - 380 degrees C
- Density:** <876 kg/m3 @ 15 degrees C
- Vapour Density (Air = 1):** Not available
- Vapour Pressure (absolute):** Not available
- pH:** Not applicable
- Flash Point:** Method Pensky-Martens CC >40 degrees C
- Lower Explosion Limit:** 1 % (vol.)
- Upper Explosion Limit:** 6 % (vol.)
- Autoignition Temperature:** 250 degrees C
- Viscosity:** 1.3 - 4.1 cSt @ 40 degrees C
- Evaporation Rate (n-BuAc = 1):** Not available
- Partition Coefficient (K_{ow}):** Not available
- Water Solubility:** Insoluble
- Other Solvents:** Hydrocarbon Solvents
- Formula:** C10 to C22 Hydrocarbons

10. STABILITY AND REACTIVITY

- Chemically Stable:** Yes
- Hazardous Polymerization:** No
- Sensitive to Mechanical Impact:** No
- Sensitive to Static Discharge:** Yes
- Hazardous Decomposition Products:** Thermal decomposition products are highly dependent on combustion conditions.
- Incompatible Materials:** Avoid strong oxidizing agents.
- Conditions of Reactivity:** Avoid excessive heat, open flames and all ignition sources.

11. TOXICOLOGICAL INFORMATION

| Ingredient (or Product if not specified) | Toxicological Data |
|--|---|
| Fuels, Diesel, No. 2 | LD50 Oral Rat >5000 mg/kg LD50 Dermal Rabbit >2000 mg/kg |

LOW SULPHUR DIESEL FUEL

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Revision Number: 7

| | |
|--|---|
| Routes of Exposure: | Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact. |
| Irritancy: | This product is expected to be irritating to skin but is not predicted to be a skin sensitizer. |
| Chronic Effects: | Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis. Prolonged exposure to high vapour concentration can cause headache, dizziness, nausea, blurred vision and central nervous system depression. |
| Pre-existing Conditions: | Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product. |
| Carcinogenicity and Mutagenicity: | The International Agency for Research on Cancer (IARC) considers that this product is not classifiable as to its carcinogenicity to humans. Middle distillates have caused skin cancers in laboratory animals when applied repeatedly and left in place between applications. This effect is believed to be caused by the continuous irritation of the skin. Good personal hygiene should be maintained to avoid this risk. The American Conference of Governmental Industrial Hygienists (ACGIH) has classified this product as A3 - confirmed animal carcinogen with unknown relevance to humans. |

12. ECOLOGICAL INFORMATION

| | |
|-------------------------------|---|
| Environmental Effects: | Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. Provincial regulations require and federal regulations may require that environmental and/or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities. May cause physical fouling of aquatic organisms. |
| Biodegradability: | Not readily biodegradable. Potential for bioaccumulation. |

13. DISPOSAL CONSIDERATIONS

Waste management priorities (depending on volumes and concentration of waste) are: 1. recycle (reprocess), 2. energy recovery (cement kilns, thermal power generation), 3. incineration, 4. disposal at a licenced waste disposal facility. Do not attempt to combust waste on-site. Incinerate at a licenced waste disposal site with approval of environmental authority.

14. TRANSPORTATION INFORMATION**Canadian Road and Rail Shipping Classification:**

| | |
|----------------------|-----------------------------------|
| UN Number | UN1202 |
| Proper Shipping Name | DIESEL FUEL |
| Hazard Class | Class 3 Flammable Liquids |
| Packing Group | PG III |
| Shipping Description | DIESEL FUEL Class 3 UN1202 PG III |

15. REGULATORY INFORMATION

LOW SULPHUR DIESEL FUEL

320-110

Revision Number: 7

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations (CPR)* and the MSDS contains all the information required by the CPR.

WHMIS Class: Class B3 Combustible Liquid
Class D2B Other Toxic Effects - Skin Irritant

DSL/NDSL Status: This product, or all components, are listed on the Domestic Substances List, as required under the Canadian Environmental Protection Act. This product and/or all components are listed on the U.S. EPA TSCA Inventory.

Other Regulatory Status: No Canadian federal standards.

16. ADDITIONAL INFORMATION**LABEL STATEMENTS**

Hazard Statement : Combustible Liquid.
Irritating to skin.

Handling Statement: Eliminate all ignition sources.
Avoid prolonged exposure to vapours.
Wear suitable gloves and eye protection.
Bond and ground transfer containers and equipment to avoid static accumulation.
Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and open flames.

First Aid Statement : Wash contaminated skin with soap and water.
Flush eyes with water.
If overcome by vapours remove to fresh air.
Do not induce vomiting.
Obtain medical attention.

Revisions: This MSDS has been reviewed and updated.
Changes have been made to:
Section 8
Section 14
Section 11