

Material Name: **Straight Run Middle Distillate(s)**

MSDS ID: NOVA-0035

Section 1 - Product and Company Identification**Synonyms:** Marine blendstock, diesel oil, home heating oil, straight run distillate blendstock**Chemical Name:** Distillates (petroleum), full-range straight-run middle**Chemical Family:** Hydrocarbon Distillates**Material Use:** Home heating fuel, blendstock for marine fuel; blendstock; solvent**Chemical Formula:** Complex mixture**NOVA Chemicals**

P.O. Box 2518, Station M

Calgary, Alberta, Canada T2P 5C6

EMERGENCY Telephone Numbers:**North America (Canada and US):**

1-800-561-6682, 1-403-314-8767 (NOVA Chemicals) (24 hours)

1-800-424-9300 (CHEMTREC-USA) (24 hours)

1-613-996-6666 (Canutec-Canada) (24 hours)

Product Information: 1-412-490-4063**MSDS Information Email:**msdsemail@novachem.com**General Comments**

This product has been assigned a CAS # of 68814-87-9.

Section 2 - Hazards Identification**HMIS Ratings: Health: 1* Fire: 2 Physical Hazard: 0 Personal Protection:** chemical goggles, gloves, respirator, coveralls*Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard***NFPA Ratings: Health: 1 Fire: 2 Reactivity: 0***Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe***Emergency Overview**

WARNING! COMBUSTIBLE. Product is a clear or yellow to red oily liquid with a kerosene odour. This product burns readily when heated to high temperatures, giving off combustible and toxic vapours. This product is harmful and possibly fatal if swallowed. Small amounts of this product, if aspirated into the lungs, may cause mild to severe injury. This product is irritating to the eyes and skin. Ingestion or excessive inhalation of this product may result in headache, sleepiness, dizziness, nausea, loss of coordination, and in extreme conditions coma and possibly death. Contains trace components that may cause cancer. Avoid contact. Prevent entry into drains, ditches, sewers, and waterways.

Potential Health Effects: Eyes

This product is irritating to the eyes.

Potential Health Effects: Skin

Prolonged and/or repeated skin contact with this product may cause irritation, blistering and severe dermatitis.

Product may be partially absorbed through intact skin. Prolonged or repeated contact with this product may cause allergic-like skin reactions and over time may possibly cause skin cancer.

Potential Health Effects: Ingestion

This product is extremely harmful if swallowed. Ingestion causes vomiting, and cramping; depression of the central nervous system. May also cause central nervous system effects including headache, sleepiness, dizziness, nausea and loss of coordination. Ingestion may cause kidney and liver damage and blood disorders, and in extreme conditions, coma and possibly death. Small amounts of this product, if aspirated into the lungs, may cause mild to severe pulmonary injury.

Potential Health Effects: Inhalation

This product may be harmful by inhalation. Excessive inhalation of this product may result in heartbeat irregularities and central nervous system effects including headache, sleepiness, dizziness, nausea, loss of coordination, and in extreme conditions, coma and possibly death. Small amounts of this product, if aspirated into the lungs, may cause mild to severe pulmonary injury.

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Section 3 - Composition / Information on Ingredients

CAS #	Component	Percent by Wt.
68814-87-9	Distillates (petroleum), full-range straight-run middle	100
Not available	Mixed sulphur-containing impurities (as Total Sulphur)	<0.05-0.1
Not Available	Mixed sulphur-containing impurities (as Total Sulphur)	0.1-0.2

Additional Information

This product is a complex mixture of aliphatic, olefinic, naphthenic and aromatic hydrocarbons having a variable boiling range of 190°C to 365°C (374°F to 689°F). This product has been tested and found to have low levels of naphthalene (CAS # 91-20-3) (<0.1% by wt.), methylnaphthalenes (<0.4% by wt.) and other polynuclear aromatic hydrocarbons (< 0.1% by wt.).

This product may or may not contain dye. If necessary, dye may be added at time of truck being loaded. The actual components and weight % concentrations vary based on operating conditions.

This product is hazardous under 29 CFR 1910.1200 (Hazard Communication).

This material is a controlled product under Canadian WHMIS regulations.

This material is regulated as a combustible material for transportation in the U.S.A.

See Section 8 for applicable exposure limits. See Section 11 for applicable toxicity data.

Section 4 - First Aid Measures

First Aid: Eyes

Remove contact lenses, if it can be done safely. Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention if symptoms develop or persist.

First Aid: Skin

Remove contaminated clothing and shoes. Wash immediately with soap and water. Seek medical attention if symptoms develop or persist. Completely decontaminate clothing, shoes and other protective equipment before reuse or discard.

First Aid: Inhalation

Move affected individual to non-contaminated air. Loosen tight clothing such as a collar, tie, belt or waistband to facilitate breathing. Seek immediate medical attention if the individual is not breathing, unconscious or if any other symptoms persist. **WARNING:** Contact through mouth-to-mouth resuscitation may pose a secondary risk to the rescuer. Avoid mouth-to-mouth contact by using a mouth shield or guard to perform artificial respiration.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention.

First Aid: Notes to Physician

For more detailed medical emergency support information call 1-800-561-6682 or 1-403-314-8767 (24 hours, NOVA Chemicals Emergency Response). Ensure thorough eye and skin decontamination. Treat unconsciousness, nausea, hypotension, seizures and cardiac arrhythmias in the conventional manner. Aspiration of this product during induced emesis can result in lung injury. If evacuation of stomach contents is considered necessary, use the method least likely to cause aspiration, such as gastric lavage after protecting the airway. Observe hospitalized patients for delayed chemical pneumonia, acute tubular necrosis, encephalopathy and dysrhythmias. Monitor for urinary phenol within 72 hours of acute exposure.

Section 5 - Fire Fighting Measures

See Section 9: Physical Properties for flammability limits, flash point and autoignition information.

General Fire Hazards

Fire and container explosion hazards are serious when this product is exposed to heat or flame. Empty containers when heated may pose a fire risk. Vapours are heavier than air and may travel along the ground to some distant source of ignition and flash back. Consider need for immediate emergency isolation and evacuation.

If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 metres (1/2 mile) in all directions; also consider initial evacuation for 800 metres (1/2 mile) in all directions.

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Explosion Hazards

Vapours may form explosive mixture with air. Keep containers away from source of heat or fire. Containers may explode when involved in a fire.

Hazardous Combustion Products

Upon combustion, this product emits carbon monoxide, carbon dioxide, low molecular weight hydrocarbons, acidic gases, nitrogen oxides, sulphur oxides, and other toxic contaminants.

Extinguishing Media

Dry chemical, foam, carbon dioxide, and water spray or fog. Use water to cool fire-exposed containers and to protect personnel. Water spray may be an ineffective extinguishing medium and may actually spread flames. Monitor water run-off for flammability, and prevent from entering drains, ditches and sewers, or other confined or underground spaces.

Fire Fighting Equipment/Instructions

Reference 2008 Emergency Response Guidebook, Guide No. 128 for additional details and instructions. Position upwind. Keep unnecessary personnel away. Move containers from fire area if you can do so without risk. Fight fire from maximum distance or use unmanned holders or monitor nozzles. Immediately withdraw in case of fire and tank venting or heat discoloration of a tank. Fire fighters should wear full-face, self-contained breathing apparatus and thermal protective clothing. Avoid inhaling any smoke and combustion products. Remove and clean or destroy any contaminated clothing. Cool containers with flooding quantities of water until well after the fire is out. Control runoff waters to prevent entry into sewers, drains, ditches, underground or confined spaces and waterways.

Section 6 - Accidental Release Measures

Evacuation Procedures

Isolate area. Keep unnecessary personnel away. Alert stand-by emergency and fire fighting personnel. Monitor surrounding area for buildup of flammable concentrations in air.

Small Spills

Spill or leak area should be isolated immediately for at least 50 metres (164 feet) in all directions. Eliminate ignition sources. Keep upwind and out of low areas. Stop discharge if safe to do so. Contain discharge by booming on water or diking on ground. Remove liquid material with non-sparking approved pumps, skimmers or vacuum equipment. Absorb with DRY earth, sand or other non-combustible material and clean up with non-sparking tools. Prevent entry into sewers, drains, ditches, underground or confined spaces, water intakes and waterways. Shovel material with non-sparking tools into appropriate container for disposal.

Large Spills

Consider downwind evacuation for 300 metres (984 feet). Eliminate ignition sources. Keep upwind and out of low areas. Stop discharge if safe to do so. Contain discharge by booming on water or diking on ground. Remove liquid material with approved non-sparking pumps, skimmers or vacuum equipment. Absorb with DRY earth, sand or other non-combustible material. Soil remediation may be required. Prevent entry into sewers, drains, ditches, underground or confined spaces, water intakes and waterways.

Special Procedures

Contact local police/emergency services and appropriate emergency telephone numbers provided in Section 1. Ensure that statutory and regulatory reporting requirements in the applicable jurisdiction are met. Wear appropriate protective equipment and clothing during cleanup. Individuals without appropriate protective equipment should be excluded from area of spill until cleanup has been completed.

See Section 8 for recommended Personal Protective Equipment and see Section 13 for waste disposal considerations.

Section 7 - Handling and Storage

Handling Procedures

Keep locked up or secured. Handle in fully grounded, properly designed and approved equipment systems that are suitable for flammable liquids. Use with adequate ventilation. Do not ingest or inhale. Collect and flare vents. Keep away from heat and ignition sources. No smoking or open flames permitted in storage, use or handling areas. Dissipate static electricity during transfer by grounding and bonding containers and equipment. Take special precautions when cold cutting or breaking into lines, or when cleaning and disposing of empty containers. Do not breathe gas, fumes, vapour or spray. In case of insufficient ventilation, wear suitable respiratory equipment.

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If ingested, seek medical advice immediately. Avoid contact with skin and eyes. Keep away from incompatible materials such as oxidizing agents and acids. Oil-contaminated clothing must be removed and cleaned prior to reuse. After handling, always wash hands thoroughly with soap and water.

Storage Procedures

Storage area should be clearly identified, well-illuminated, clear of obstruction and accessible only to trained and authorized personnel. Adequate security must be provided so that unauthorized personnel do not have access to product. Store in grounded, properly designed and approved vessels and away from incompatible materials. Store and use away from heat, sparks, open flame, or any other ignition source. An anti-static agent may be added to storage tanks to reduce static charge build-up during loading. Store according to applicable regulations for combustible materials for storage tanks, containers, piping, buildings, rooms, cabinets, allowable quantities and minimum storage distances. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Have appropriate extinguishing capability in storage area (e.g. portable fire extinguishers (dry chemical, foam or carbon dioxide)) and flammable gas detectors. Water spray is ineffective for extinguishing fires. Prevent soil contamination. Keep absorbents for leaks and spills readily available. Equip storage tank vents with a flame arrestor. Inspect vents during winter conditions for vapour ice buildup. Storage tanks should be above ground and diked to hold entire contents.

See Section 8: Exposure Controls/Personal Protection for appropriate Personal Protective Equipment. See Section 10 for information on Incompatibilities.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines

A: General Product Information

Refer to published exposure limits - use effective control measures and PPE to maintain worker exposure to concentrations that are below these limits. Ensure that eyewash stations and safety showers are in close proximity to work locations.

B: Component Exposure Limits

ACGIH, OSHA, NIOSH, EPA, Alberta, and Ontario exposure limit lists have been checked for major components listed with CAS registry numbers. Other exposure limits may apply, check with proper authorities.

*NOTE: The Vacated OSHA Permissible Exposure Limits (PELs) are those provided in the 1989 update to OSHA's Air Contaminants Standard 29 CFR 1910.1000. These limits were vacated by the U.S. Court of Appeals, Eleventh Circuit but may be enforceable in some states.

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ACGIH: 100 mg/m³ TWA (inhalable fraction and vapor) (as total hydrocarbons)(related to Diesel fuel)
Skin - potential significant contribution to overall exposure by the cutaneous route
Alberta: 100 mg/m³ TWA (as total hydrocarbons)(related to Diesel fuel)
Ontario: 100 mg/m³ TWA (inhalable fraction and vapour)(related to Diesel fuel)
Skin - Danger of cutaneous absorption

Total Sulphur (CAS # Not Available)

Alberta: 10 mg/m³ TWA (related to Sulphur)

ENGINEERING CONTROLS

Engineering methods to reduce hazardous exposure are preferred controls. Methods include mechanical ventilation (dilution and local exhaust) process or personal enclosure, remote and automated operation, control of process conditions, leak detection and repair systems, and other process modifications. Ensure all exhaust ventilation systems are discharged to outdoors, away from air intakes. Supply sufficient replacement air to make up for air removed by exhaust systems. Administrative (procedure) controls and use of personal protective equipment may also be required.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear safety glasses; chemical goggles are recommended if splashing is possible, or to prevent eye irritation from vapours.

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Personal Protective Equipment: Skin/Hands/Feet

Use chemically resistant gloves when handling product. Wear chemical-resistant safety footwear with good traction to prevent slipping. Work clothing that sufficiently prevents skin contact should be worn, such as coveralls and/or long sleeves and pants. Fire resistant (i.e., Nomex) or natural fibre clothing (i.e., cotton or wool) is recommended. Synthetic clothing can generate static electricity and is not recommended where flammable vapour releases may occur. Static Dissipative (SD) rated footwear is recommended.

Personal Protective Equipment: Respiratory

If engineering controls and ventilation are not sufficient to prevent buildup of aerosols, vapours or dusts, appropriate NIOSH approved air-purifying respirators or self-contained breathing apparatus (SCBA) appropriate for exposure potential should be used. Air supplied breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.

Personal Protective Equipment: General

Personal protective equipment (PPE) should not be considered a long-term solution to exposure control. Employer programs to properly select, fit, maintain, and train employees to use equipment must accompany PPE. Consult a competent industrial hygiene resource, the PPE manufacturer's recommendation, and/or applicable regulations to determine hazard potential and ensure adequate protection.

Section 9 - Physical & Chemical Properties

Physical State and Appearance:	Oily liquid	Colour:	Clear or yellow to red
Odour:	Kerosene-like	Odour Threshold:	Can be detected at low ppm levels
pH:	Not applicable	Vapour Pressure:	Range: 0.75 to 1.5 mm Hg at 20°C (68°F)
Vapour Density at 0°C (Air=1):	4	Boiling Point:	Range: 190°C to 365°C (374°F to 689°F)
Freezing Point:	-30°C (-22°F)	Solubility (H₂O):	Negligible
Specific Gravity (Water=1):	0.83 at 15°C (59°F)	Evaporation Rate (n-Butyl Acetate=1):	Not available
Viscosity:	Range: 1.8 to 3.4 cSt at 40°C (104°F)	Percent Volatile:	99%
Octanol/H₂O Coeff.:	Not available	Auto Ignition:	257°C (495°F)
Flash Point:	Range: 62°C to 100°C (144°F to 212°F)	Flash Point Method:	Pensky-Martens, closed cup
Upper Flammable Limit (UFL):	Range: 5-6%	Lower Flammable Limit (LFL):	Range: 0.7-1%
Flammability Classification:	Combustible		

Section 10 - Stability & Reactivity Information

Chemical Stability

This product is stable under normal use conditions for shock, vibration, pressure, or temperature.

Chemical Stability: Conditions to Avoid

Keep away from heat, sparks, or open flame.

Incompatibility

May react with strong acids or oxidizing agents. Heated vapours or mists may form explosive mixture with air.

Possibility of Hazardous Reactions or Hazardous Polymerization

Hazardous polymerization not likely to occur.

Corrosivity

Not corrosive to the common metals.

Hazardous Decomposition

Upon decomposition, this product emits carbon monoxide, carbon dioxide, low molecular weight hydrocarbons, acidic gases, nitrogen oxides, sulphur oxides, and other toxic contaminants.

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Section 11 - Toxicological Information

A: Acute Toxicity - General Product Information

Similar fuel oil mixtures have been tested under the EPA's High Production Volume (HPV) Chemical Challenge Program for the Gas Oils Category. This product is a very strong skin irritant. It produces severe pneumonitis if inhaled into the lungs. Delayed dermatitis and chemical blistering may develop from contact with the skin. Ingestion causes vomiting, cramping and depression of the central nervous system. Exposure can cause headache, nausea, dizziness, sleepiness, loss of coordination and in extreme conditions coma and possibly death. This product tested positive in the Ames mutagenicity test.

B: Acute Toxicity - LD50/LC50

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Oral LD50 Rat: 12 g/kg

C: Chronic Toxicity - General Product Information

Similar fuel oil mixtures have been tested under the EPA's High Production Volume (HPV) Chemical Challenge Program for the Gas Oils Category. Animal skin-painting bioassays have reported evidence of increased dermal irritation, fibrosis, necrosis and tumours, as well as damage to the kidney. Some petroleum distillates (containing >5% polynuclear aromatic hydrocarbons) have been shown to cause skin cancer in laboratory animals following prolonged and frequent skin contact. However, this product contains <0.1 wt% total polynuclear aromatic hydrocarbons.

D: Chronic Toxicity - Carcinogenic Effects

ACGIH, EPA, IARC, OSHA, and NTP carcinogen lists have been checked for selected similar materials or those components with CAS registry numbers.

Straight Run Middle Distillate(s) (68814-87-9)

ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans (as total hydrocarbons)(related to Diesel fuel)

IARC: Monograph 45 [1989] (related to Fuel oils, distillate (light)) (Group 3 (not classifiable))

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

Similar fuel oil mixtures have been tested under the EPA's High Production Volume (HPV) Chemical Challenge Program for the Gas Oils Category. Product is largely insoluble in water, and evaporates slowly. Under ambient conditions, this product has low volatility and absorbs quickly in soil. This product has been shown to be toxic to aquatic organisms.

B: Component Analysis - Ecotoxicity - Aquatic/Terrestrial Toxicity

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96 Hr LC50 Pimephales promelas: 35 mg/L [flow-through]

48 Hr EL50 Daphnia magna= 5.3 mg/L [static]

Environmental Fate/Mobility

Under ambient conditions, the product has low volatility into air. It is largely insoluble in water, evaporates slowly, and will disperse on water surfaces. Wind and wave action can cause formation of a mousse (emulsion) which may absorb particulates and sink. This product is oily and will rapidly adsorb into soils and sediment. Components can migrate through soil and travel with ground water. This product is considered damaging on direct contact with plants, birds, and water mammals. This product is considered somewhat mobile in soils; varies with soil type, porosity, and other factors.

Persistence/Degradability

Studies have been conducted on various grades of oils, for site remediation, and following water and land spills and recovery. This product is considered ultimately, but not readily, biodegradable. Some components biodegrade quickly while other higher molecular weight components will degrade more slowly. Biodegradation rates depend on oxygenation (aeration), mixing and the presence of appropriate microorganisms.

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Bioaccumulation/Accumulation

This product is considered somewhat mobile in soils; varies with soil type, porosity, and other factors. This product will accumulate on the surface of plants, waterfowls and mammals, resulting in serious injury and possible death. Product is rapidly taken up by mussels and retained for more than two weeks. Some aromatic components in the product have a moderate potential for bioaccumulation.

Section 13 - Disposal Considerations

U.S./Canadian Waste Information

A: General Product Information

This product may be known to be a hazardous waste according to US and Canadian regulations. The use, mixing or processing of this product may alter its properties or hazards. Contact federal, provincial/state and local authorities in order to generate or ship a waste material associated with this product to ensure materials are handled appropriately and meet all criteria for disposal of hazardous waste. **DO NOT ATTEMPT TO DISPOSE OF BY UNCONTROLLED IGNITION.** Since emptied containers retain product residue, follow safe handling/label warnings even after container is emptied.

See Section 7: Handling and Storage and Section 8: Exposure Controls/Personal Protection for additional handling information that may be applicable for safe handling and the protection of employees.

Waste generator is advised to carefully consider hazardous properties and control measures needed for other materials that may be found in the waste.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Section 14 - Transportation Information

US DOT Information

Shipping Name: PETROLEUM DISTILLATES, N.O.S.

UN #: UN1268 **Hazard Class:** 3 **Packing Group:** III

Required Label(s): FLAMMABLE LIQUID

Additional Information: 2008 Emergency Response Guidebook, Guide # 128.

Canadian TDG Information

Shipping Name: PETROLEUM DISTILLATES, N.O.S.

UN #: UN1268 **Hazard Class:** 3 **Packing Group:** III

Required Label(s): FLAMMABLE LIQUID

Additional Information: 2008 Emergency Response Guidebook, Guide # 128.

International Air Transport Association (IATA) and International Civil Aviation Organization (ICAO) Information

Shipping Name: Not regulated as dangerous goods for transportation

International Maritime Dangerous Goods (IMDG) Code

Shipping Name: Not regulated as dangerous goods for transportation

Section 15 - Regulatory Information

A: International Regulations

Component Analysis - International Inventory Status

Component	CAS #	US - TSCA	CANADA - DSL	EU - EINECS
Distillates (petroleum), full-range straight-run middle	68814-87-9	Yes	Yes	Yes

B: USA Federal & State Regulations

Ongoing occupational hygiene, medical surveillance programs, site emission or spill reporting may be required by Federal or State regulations. Check for applicable regulations.

USA OSHA Hazard Communication Class

This product is hazardous under 29 CFR 1910.1200 (Hazard Communication). HCS Classes:

HCS CLASS: Combustible liquid having a flash point between 37.8°C (100°F) and 93.3°C (200°F).

HCS CLASS: Irritating substance.

HCS CLASS: Target organ effects.

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USA Right-to-Know - Federal

None of this product's components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

USA Right-to-Know - State

The following components appear on one or more of the following state hazardous substances lists. Some components (including those present only in trace quantities, and therefore not listed in this document) may be included on the Right-To-Know lists of other U.S. states. The reader is therefore cautioned to contact his or her NOVA Chemicals' representative or NOVA Chemicals' Product Integrity group for further U.S. State Right-To-Know information.

Component	CAS #	NJ	PA
Distillates (petroleum), full-range straight-run middle	68814-87-9	Yes	Yes
Total Sulfur (related to Sulfur)	Not available	Yes ¹	Yes ¹

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

C: Canadian Regulations - Federal and Provincial

Canadian Environmental Protection Act (CEPA): All components of this material are on the Domestic Substances List (DSL) or are exempt and are acceptable for use under the provisions of CEPA.

WHMIS Ingredient Disclosure List (IDL)

No components are listed in the WHMIS Ingredient Disclosure List (IDL).

WHMIS Classification

Workplace Hazardous Materials Information System (WHMIS): This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and the MSDS contains all the information required by the CPR.

WHMIS CLASS B3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).

WHMIS CLASS D2A: Very Toxic.

WHMIS CLASS D2B: Toxic (skin/eye irritant).

Other Regulations

Ongoing occupational hygiene, medical surveillance programs, site emission or spill reporting may be required by Federal or Provincial regulations. Check for applicable regulations.

Section 16 - Other Information

Label Information

WARNING! COMBUSTIBLE. Product is a clear or yellow to red oily liquid with a kerosene odour. This product burns readily when heated to high temperatures, giving off combustible and toxic vapours. This product is harmful and possibly fatal if swallowed. Small amounts of this product, if aspirated into the lungs, may cause mild to severe injury. This product is irritating to the eyes and skin. Ingestion or excessive inhalation of this product may result in headache, sleepiness, dizziness, nausea, loss of coordination, and in extreme conditions coma and possibly death. Contains trace components that may cause cancer. Avoid contact. Prevent entry into drains, ditches, sewers, and waterways.

FIRST AID:

SKIN: Remove contaminated clothing and shoes. Wash immediately with soap and water. Seek medical attention if symptoms develop or persist. Completely decontaminate clothing, shoes and other protective equipment before reuse or discard.

EYES: Remove contact lenses, if it can be done safely. Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention if symptoms develop or persist.

INHALATION: Move affected individual to non-contaminated air. Loosen tight clothing such as a collar, tie, belt or waistband to facilitate breathing. Seek immediate medical attention if the individual is not breathing, unconscious or if any other symptoms persist. WARNING: Contact through mouth-to-mouth resuscitation may pose a secondary risk to the rescuer. Avoid mouth-to-mouth contact by using a mouth shield or guard to perform artificial respiration.

INGESTION: DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention.

IN CASE OF A LARGE SPILL: Consider downwind evacuation for 300 metres (984 feet). Eliminate ignition sources. Keep upwind and out of low areas. Stop discharge if safe to do so. Contain discharge by booming on water or diking on ground. Remove material with approved non-sparking pumps, skimmers or vacuum equipment. Absorb with DRY earth, sand or other non-combustible material. Soil remediation may be required. Prevent entry into sewers, drains, ditches, underground or confined spaces, water intakes and waterways.

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References

Available on request.

Special Considerations

The International Agency for Research on Cancer (IARC) has categorized diesel exhaust as carcinogenic to humans (Class 2A).

Diesel exhaust particulates

NTP: Reasonably Anticipated to be a Human Carcinogen (related to Diesel exhaust particulates)

IARC: Monograph 46 [1989] (related to Diesel engine exhaust) (Group 2A (probably carcinogenic to humans))

For additional information on equipment bonding and grounding, refer to the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity".

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADR = Transport of Dangerous Goods by Road; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; BOD = Biochemical Oxygen Demand; CAS = Chemical Abstracts Service; CEPA = Canadian Environmental Protection Act; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CFR = Code of Federal Regulations; CPR = Controlled Products Regulations; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EC50 = Effective Concentration 50%; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EPA = Environmental Protection Agency; EU = European Union; FDA = Food and Drug Administration; GHS = Globally Harmonized System for the Classification and Labelling of Chemicals; HCS = Hazard Communication Standard; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; ICAO = International Civil Aviation Organization; IDL = Ingredient Disclosure List; IDLH = Immediately Dangerous to Life or Health; IMDG = International Maritime Dangerous Goods; IMO = International Maritime Organization; ISHL = Industrial Safety and Health Law; Kow = Octanol/water partition coefficient; LC50 = Lethal Concentration 50%; LD50 = Lethal Dose 50%; LEL = Lower Explosive Limit; LFL = Lower Flammable Limit; LLV = Level Limit Ceiling Limit (Sweden dust); MAK = Maximum Concentration Value in the Workplace; MITI = Ministry of International Trade and Industry; MSDS = Material Safety Data Sheet; NAB = Threshold Values (Indonesia); NCEC = National Chemical Emergency Centre; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NTP = National Toxicology Program; OEL = Occupational Exposure Limit; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit; PNOC = Particulates Not Otherwise Classified; PPE = Personal Protective Equipment; PRTR = Designated Chemical Substance Law (Japan); PSD = Short Term Exposure Limit (Indonesia); RCRA = Resource Conservation and Recovery Act; REACH = Registration, Evaluation, Authorisation and Restriction of Chemical Substances; REL = Recommended Exposure Limit; RID = Transport of Dangerous Goods by Rail; SARA = Superfund Amendments and Reauthorization Act; SCBA = Self Contained Breathing Apparatus; SDS = Safety Data Sheet; SEPA = State Environmental Protection Administration; STEL = Short Term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average; UEL = Upper Explosive Limit; UFL = Upper Flammable Limit; VLA-ED = Valor límite Ambiental de Exposición Diaria (Environmental Exposure Daily Limit Value); VME = valeur limite d'exposition (Occupational Exposure Limits); WHMIS = Workplace Hazardous Materials Information Systems

MSDS Prepared by: NOVA Chemicals

MSDS Information Phone Number: 1-412-490-4063

Other Information

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