

## Material Safety Data Sheet

Material Name: **HAGO**

MSDS ID: NOVA-0010

### Section 1 - Product and Company Identification

**Synonyms:** Heavy Atmospheric Gas Oil; H.A.G.O.; Gas Oils (petroleum), straight-run; Petroleum distillates**Chemical Name:** Gas Oils (petroleum), heavy atmospheric**Chemical Family:** Hydrocarbon**Material Use:** Industrial feedstock: blended fuels**Chemical Formula:** Complex mixture**NOVA Chemicals**

P.O. Box 2518, Station M

Calgary, Alberta, Canada T2P 5C6

**Product Information:** 1-412-490-4063**MSDS Information Email:**[msdsemail@novachem.com](mailto:msdsemail@novachem.com)**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)

**Mexico and South America:** +44 (0) 1235 239 670 (NCEC) (24 hours)

### 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! Product is a pale yellow-coloured, thick liquid with a fuel oil odour. This product is flammable when heated to high temperatures. Harmful if inhaled. This product may be irritating to the eyes, skin, and the respiratory system. Ingestion or inhalation of heated vapours or mists may result in central nervous system effects including headache, sleepiness, dizziness, slurred speech and blurred vision. On prolonged contact, may cause serious dermatitis and possibly skin cancer. Small amounts of this product, if aspirated into the lungs, may cause mild to severe pulmonary injury. Prevent entry into ditches, drains, sewers and waterways.

**Potential Health Effects: Eye**

This product may cause irritation to the eyes on contact with heated vapours or liquid.

**Potential Health Effects: Skin**

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

**Potential Health Effects: Ingestion**

This product is harmful if swallowed. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Ingestion of this product may result in central nervous system effects including headache, sleepiness, dizziness, slurred speech and blurred vision. Ingestion may also cause kidney and liver damage. Swallowing or vomiting of liquid may cause aspiration into the lungs, and subsequent mild to severe pulmonary injury.

**Potential Health Effects: Inhalation**

This product is harmful if inhaled. Excessive inhalation of this product causes headache, dizziness, nausea and loss of coordination. Inhalation of heated vapours or mists may cause headache, dizziness, nausea and loss of coordination. Excessive inhalation of heated vapours over time may cause lung, kidney and liver damage.

Aspiration of liquid into the lungs can cause mild to severe pulmonary injury.

### Section 3 - Composition/Information on Ingredients

CAS #	Component	Percent by Wt.
68783-08-4	Gas oils, petroleum, heavy atmospheric *	100

**Additional Information**

\* This product may also be described as Gas Oil (petroleum) straight-run (CAS # 64741-43-1). It is a chemical substance of unknown or variable composition. Product may contain small amounts of polynuclear aromatic hydrocarbons (PAHs) (<10% by weight). Product contains a maximum of 0.5 wt% total sulphur compounds.

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This product is hazardous under 29 CFR 1910.1200 (Hazard Communication).  
This material is a controlled product under Canadian WHMIS regulations.  
This product is not regulated as dangerous goods for transportation.

*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 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, is 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 auto-ignition information.*

### General Fire Hazards

This product is flammable when heated to high temperatures. Empty containers containing residues when heated may pose a fire risk. Fire and container explosion hazards are high when this product is exposed to heat or flame. Vapours are heavier than air and may travel along the ground to some distant source of ignition and flash back. Consider initial downwind evacuation for at least 300 metres (984 feet). If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 metres (1/2 mile) in all directions.

### Explosion Hazards

Heated vapours may form explosive mixture with air. Keep containers away from source of heat or fire.

### Hazardous Combustion Products

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

### Extinguishing Media

Dry chemical, foam, carbon dioxide, 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.

### Fire Fighting Equipment/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 container venting or heat discolouration of a container. Fire fighters should wear full-face, self-contained breathing apparatus and thermal protective clothing. Avoid inhaling any smoke and combustion materials. 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.

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## Section 6 - Accidental Release Measures

### Evacuation Procedures

Isolate area. Keep unnecessary personnel away. Alert stand-by emergency and fire fighting personnel.

### Small Spills

Eliminate ignition sources. Spill or leak area should be isolated. Keep upwind and out of low areas. Stop discharge if safe to do so. Contain discharge by booming on water or diking on ground. Absorb/adsorb residual materials 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

Eliminate ignition sources. Spill or leak area should be isolated immediately. 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 non-sparking, approved pumps, skimmers or vacuum equipment. Absorb/adsorb residual materials with DRY earth, sand or other non-combustible materials. 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. 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. Parts and equipment should be steam cleaned prior to maintenance procedures. Do not breathe gas, fumes, vapour or spray. In case of insufficient ventilation, wear suitable respiratory equipment. 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.

Recommended maximum temperature for storage and loading is less than 100°C (212°F).

### 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. Store according to applicable regulations for flammable 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. 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.*

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## 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.

#### Gas oils, petroleum, heavy atmospheric (68783-08-4)

- ACGIH: 5 mg/m<sup>3</sup> TWA (inhalable fraction ) (related to Mineral oil, pure, highly and severely refined)  
-- TWA (exposure by all routes should be carefully controlled to levels as low as possible) (related to Mineral oil, poorly and mildly refined)
- OSHA (Vacated)\*: 5 mg/m<sup>3</sup> TWA (related to Oil mist, mineral)  
OSHA (Final): 5 mg/m<sup>3</sup> TWA (related to Oil mist, mineral)  
NIOSH: 5 mg/m<sup>3</sup> TWA; 10 mg/m<sup>3</sup> STEL (related to Oil mist (mineral))  
2500 mg/m<sup>3</sup> IDLH (related to Oil mist (mineral))
- Alberta: 5 mg/m<sup>3</sup> TWA; 10 mg/m<sup>3</sup> STEL (related to Oil mist, mineral)  
Ontario: 5 mg/m<sup>3</sup> TWA; 10 mg/m<sup>3</sup> STEL (related to Oil, mineral – mist) (sampled by method that does not collect vapour)

#### Sulphur containing compounds (total, mixture) (Not Available)

- Alberta: 10 mg/m<sup>3</sup> 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 and ignition sources. 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 heated vapours or mists.

#### 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. Splashing or contact with liquid material is possible; consider the need for an impervious overcoat. 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 a flammable vapour release 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 or vapours, 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.

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## Section 9 - Physical & Chemical Properties

<b>Physical State and Appearance:</b>	Liquid, thick, oily	<b>Colour:</b>	Pale yellow
<b>Odour:</b>	Fuel oil	<b>Odour Threshold:</b>	Not available
<b>pH:</b>	Not applicable	<b>Vapour Pressure:</b>	<15 mm of Hg at 20°C (68°F)
<b>Vapour Density at 0°C (Air=1):</b>	Not available	<b>Boiling Point:</b>	Range: 175°C to 465°C (347°F to 869°F)
<b>Pour Point:</b>	0°C (32°F)	<b>Solubility (H2O):</b>	Negligible
<b>Specific Gravity (Water=1):</b>	Range: 0.86 to 0.88 at 15°C (60°F)	<b>Evaporation Rate (n-Butyl Acetate=1):</b>	Slow; some components may volatilize
<b>Viscosity:</b>	Range: 5.7 to 6.4 cSt at 40°C (104°F)	<b>Auto Ignition:</b>	Not available
<b>Flash Point:</b>	>110°C (>230°F)	<b>Flash Point Method:</b>	PMCC
<b>Upper Flammable Limit (UFL):</b>	6% (estimated)	<b>Lower Flammable Limit (LFL):</b>	1.3% (estimated)
<b>Flammability Classification:</b>	Flammable when heated		

## Section 10 - Stability & Reactivity Information

### Chemical Stability

This product is stable when handled and stored at recommended temperatures.

### Chemical Stability: Conditions to Avoid

Keep away from uncontrolled heat, sparks, or open flame.

### Incompatibility

This product may react with oxidizing agents. This product may react with strong acids. Heated vapours or mists may form explosive mixtures in 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, sulphur oxides and/or low molecular weight hydrocarbons and toxic gases.

## Section 11 - Toxicological Information

### A: Acute Toxicity - General Product Information

Similar products have been tested under the EPA's High Production Volume (HPV) Chemical Challenge program for Heavy Fuels Oil Category submitted by the American Petroleum Institute (API). Product is an eye, skin, and respiratory tract irritant and a CNS depressant. Severe skin irritation or dermatitis is possible on prolonged contact. Exposure can cause headache, nausea, weakness, dizziness, sleepiness, loss of coordination and even loss of consciousness. Product is a pulmonary aspiration hazard; if aspirated in small amounts may cause damage to the lungs and with aspiration of large amounts may result in death.

### B: Acute Toxicity - LD50/LC50

#### Gas oils, petroleum, heavy atmospheric (68783-08-4)

Inhalation LC50 Rat: 1.72 to 7.64 mg/L/4H; Oral LD50 Rat: 5000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg (related to Gas oils, petroleum, straight-run) (API, CONCAWE)

Oral LD50 Mouse: 22 g/kg (related to Oil mist, mineral) (API, CONCAWE)

#### Sulphur containing compounds (total, mixture) (Not Available)

Inhalation LC50 Rat: >6.23 mg/L/4H; Oral LD50 Rat: >3000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg (related to Sulphur)

### C: Chronic Toxicity - General Product Information

Similar products have been tested under the EPA's High Production Volume (HPV) Chemical Challenge program for Heavy Fuels Oil Category submitted by the American Petroleum Institute (API). Petroleum distillates of this type have been shown to cause skin cancer in laboratory animals following prolonged and frequent skin contact. Based on skin painting studies on other refinery streams, this product is expected to possess weak to moderate carcinogenic activity. Product is likely to contain polycyclic aromatic hydrocarbons, some of which are known to be carcinogenic.

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## 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.

### Gas oils, petroleum, heavy atmospheric (68783-08-4)

- ACGIH: A4 - Not Classifiable as a Human Carcinogen (highly & severely refined);  
A2 - Suspected Human Carcinogen (poorly & mildly refined) (related to Oil mist, mineral)  
A2 - Suspected Human Carcinogen (related to Untreated and mildly-treated oils)
- IARC: Supplement 7 [1987], Monograph 33 [1984] (related to Mineral oils, untreated and mildly treated)  
(Group 1 (carcinogenic to humans))

## Section 12 - Ecological Information

### Ecotoxicity

#### A: General Product Information

Similar products have been tested under the EPA's High Production Volume (HPV) Chemical Challenge program for Heavy Fuels Oil Category submitted by the American Petroleum Institute (API). Product is largely insoluble in water, has minimal volatility and becomes a persistent solid residue on land. Product is considered environmentally toxic and damaging on contact with plants, birds, and water mammals. Extensive ecosystem studies have been conducted on various grades of processed hydrocarbon oils, following water and land spills and recovery. This product would likely have effects similar to other heavy, mildly refined crude oil products.

#### B: Component Analysis - Ecotoxicity - Aquatic/Terrestrial Toxicity

##### Gas oils, petroleum, heavy atmospheric (68783-08-4)

###### Test and Species

48 Hr LC50 Brachydanio rerio

###### Results and Conditions

48 mg/L [semi-static]

##### Sulphur containing compounds (Not Available)

###### Test and Species

96 Hr LC50 Brachydanio rerio

96 Hr LC50 Lepomis macrochirus

96 Hr LC50 Oncorhynchus mykiss

###### Results and Conditions

866 mg/L [static]

<14 mg/L [static]

>180 mg/L [static] related to Sulphur

### Environmental Fate/Mobility

In ambient conditions, the product has minimal to no volatility into air. Any volatile component degrades by reaction with hydroxyl radicals, in the troposphere, under the influence of sunlight, with half-lives less than one day. These waxy hydrocarbon mixtures are not subject to hydrolysis reactions with water. This complex petroleum substance is expected to partition primarily to soil and/or sediment. Product will strongly adhere to soils and sediment. Mobility in the aquatic and atmospheric environment of these hydrocarbon mixtures is low due to low water solubility and low vapour pressure. In deeper soils and sediment, heavier components have low to moderate mobility.

### Persistence/Degradability

This product is expected to biodegrade in the environment under both aerobic and anaerobic conditions. Similar products have been measured and shown to biodegrade in the environment under both aerobic (20 to 26% in 28 days) and anaerobic (86% in 28 days) with rates dependent on soil moisture, bacteria, and other conditions. Possible hazardous short-term degradation products are not likely. Recovery time for land and water following a major spill is estimated to extend into months, possibly years. Some trace PAH components are considered persistent and bioaccumulative toxins.

### Bioaccumulation/Accumulation

This product will accumulate on the surface of plants, waterfowls and mammals, resulting in serious injury and possible death.

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## Section 13 - Disposal Considerations

### U.S./Canadian Waste Information

#### A: General Product Information

This product may be a hazardous waste according to US RCRA 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:** Not regulated as a hazardous material for transportation.

### Canadian TDG Information

**Shipping Name:** Not regulated as dangerous goods for transportation.

### 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
Gas oils, petroleum, heavy atmospheric	68783-08-4	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 considered hazardous under 29 CFR 1910.1200 (Hazard Communication). HCS Classes:

HCS CLASS: MAY CAUSE CANCER

HCS CLASS: Irritating substance.

#### 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 substance 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
Gas oils, petroleum, heavy atmospheric ( <sup>1</sup> related to Oil mist, mineral) ( <sup>2</sup> related to Mineral Oil)	68783-08-4	Yes <sup>1</sup>	Yes <sup>2</sup>
Sulphur containing compounds (total, mixture) ( <sup>1</sup> related to Sulphur)	Not available	Yes <sup>1</sup>	Yes <sup>1</sup>

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## C: Canadian Regulations - Federal and Provincial

Canadian Environmental Protection Act (CEPA): All components of this product 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)

The following components are identified under the Canadian Hazardous Products Act - Ingredient Disclosure List (IDL):

Component	CAS #	Minimum Concentration
Gas oils, petroleum, heavy atmospheric	68783-08-4	1 % (related to Oil, mineral)

## 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 D1B: Toxic

WHMIS Class D2A: Carcinogen

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!** Product is a pale yellow-coloured, thick liquid with a fuel oil odour. This product is flammable when heated to high temperatures. Harmful if inhaled. This product may be irritating to the eyes, skin, and the respiratory system. Ingestion or inhalation of heated vapours or mists may result in central nervous system effects including headache, sleepiness, dizziness, slurred speech and blurred vision. On prolonged contact, may cause serious dermatitis and possibly skin cancer. Small amounts of this product, if aspirated into the lungs, may cause mild to severe pulmonary injury. Prevent entry into ditches, drains, 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 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, is 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:** Eliminate ignition sources. Spill or leak area should be isolated immediately. 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 non-sparking, approved pumps, skimmers or vacuum equipment. Absorb/adsorb residual materials with DRY earth, sand or other non-combustible materials. Soil remediation may be required. Prevent entry into sewers, drains, ditches, underground or confined spaces, water intakes and waterways.

## References

Available on request.

## Special Considerations

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".

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## Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; CAS = Chemical Abstracts Service; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CPR = Controlled Products Regulations; DOT = Department of Transportation; DSL = Domestic Substances List; EINECS = European Inventory of Existing Commercial Substances; EPA = Environmental Protection Agency; EU = European Union; FDA = Food and Drug Administration; HMIS = Hazardous Materials Information System; IARC = International Agency for Research on Cancer; IDL = Ingredient Disclosure List; IDLH = Immediately Dangerous to Life or Health; Kow = Octanol/water partition coefficient; LEL = Lower Explosive Limit; NFPA = National Fire Protection Association; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; RCRA = Resource Conservation and Recovery Act; SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit; TDG = Transportation of Dangerous Goods; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

MSDS Prepared by: NOVA Chemicals

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

## Other Information

### Notice to Reader:

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This is the end of MSDS # NOVA-0010.