



Shell Canada Limited Material Safety Data Sheet

Effective Date: 2008-08-20

Supersedes: 2005-08-29



Class B3 Combustible Liquid

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: **AEROSHELL* FLD. 4**
 SYNONYMS: HYDRAULIC FLUID
 MIL-H-5606A
 PRODUCT USE: Lubricating oil
 PRODUCT CODE: 421-150

SUPPLIER

Shell Canada Limited (SCL)
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TELEPHONE NUMBERS

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

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
Distillates (Petroleum), Hydrotreated Light Naphthenic, Low Flash	64742-53-6	30 - 60	Yes
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	10 - 30	Yes
Distillates (Petroleum), Hydrotreated Light	64742-47-8	10 - 30	Yes

See Section 8 for Occupational Exposure Guidelines.

3. HAZARDS IDENTIFICATION

Physical Description: Liquid Red Colour Hydrocarbon Odour

Routes of Exposure: Exposure will most likely occur through skin contact or inhalation.

Hazards:

This product is not expected to be irritating and has a low level of toxicity under

normal use.

Combustible Liquid.

Ingestion may result in vomiting. Avoid aspiration of vomitus into lungs as small quantities may result in aspiration pneumonitis.

Inhalation of oil mist or vapours from hot oil may cause irritation of the upper respiratory tract.

Handling:

Eliminate all ignition sources.

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 MEASURES

- Eyes:** Flush eyes with water for at least 15 minutes while holding eyelids open. If irritation occurs and persists, obtain medical attention.
- Skin:** Wipe excess from skin. Wash contaminated skin with mild soap and water for at least 15 minutes. If irritation occurs and persists, obtain medical attention. If material is injected under the skin, get medical attention promptly to prevent serious damage; do not wait for symptoms to develop.
- Ingestion:** Do not induce vomiting; get medical help 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. Obtain medical attention.
- Notes to Physician:** In general, lubricating oils have low oral toxicity. The main hazard following accidental ingestion is aspiration of the liquid into the lungs producing chemical pneumonitis. High pressure injection under the skin may have serious consequences and may require urgent treatment.

5. FIRE FIGHTING MEASURES

- Extinguishing Media:** Dry Chemical
Carbon Dioxide
Foam
Water Fog
- Firefighting Instructions:** Caution - Combustible. Do not use a direct stream of water as it may spread fire. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus. 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. Product will float and can be reignited on surface of water. Delayed lung damage can be experienced after exposure to combustion products, sometimes hours after the exposure.
- Hazardous Combustion Products:** A complex mixture of airborne solid, liquid, particulates and gases will evolve when this material undergoes pyrolysis or combustion. Carbon monoxide,

carbon dioxide and dense smoke are produced on combustion.

6. ACCIDENTAL RELEASE MEASURES

Issue warning "Combustible". Eliminate all ignition sources. Isolate hazard area and restrict access. Wear appropriate breathing apparatus (if applicable) and protective clothing. Handling equipment must be grounded. Spilled material is slippery. Work upwind of spill if it is safe to do so. Avoid direct contact with material. Stop leak only if safe to do so. Dike and contain land spills; contain spills to water by booming. For large spills remove by mechanical means and place in containers. Adsorb residue or small spills with adsorbent material and remove to non-leaking containers for disposal. Notify appropriate environmental agency(ies). After area has been cleaned up to the satisfaction of regulatory authorities, flush area with water to remove trace residue. Dispose of recovered material as noted under Disposal Considerations.

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. Empty containers are hazardous, may contain flammable/explosive dusts, residues or vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers. 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, are 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):

Oil mist (mineral): 5 mg/m³ (STEL: 10 mg/m³)

Mechanical Ventilation: Concentrations in air should be maintained below the occupational exposure limit if unprotected personnel are involved. Use explosion-proof ventilation as required to control vapour concentrations. Local ventilation recommended where mechanical ventilation is ineffective in controlling airborne concentrations below the recommended occupational exposure limit. 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: No special eye protection is routinely necessary. Wear safety glasses as appropriate.

Skin Protection: Not normally needed. Chemically-resistant gloves should be worn for frequent or

Respiratory Protection:

prolonged contact with this product.

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 AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	Red Colour
Odour:	Hydrocarbon Odour
Odour Threshold:	Not available
Freezing/Pour Point:	< -60 °C
Density:	873.5 kg/m ³ @ 15 °C
Vapour Density (Air = 1):	Not available
pH:	Not applicable
Flash Point:	Pensky-Martens CC > 88 °C
Lower Flammable Limit:	Not available
Upper Flammable Limit:	Not available
Autoignition Temperature:	Not available
Viscosity:	> 4.9 cSt @ 100 °C
Evaporation Rate (n-BuAc = 1):	Not available
Partition Coefficient (log K_{ow}):	Not available
Water Solubility:	Negligible
Other Solvents:	Hydrocarbon Solvents

10. STABILITY AND REACTIVITY

Chemically Stable:	Yes
Hazardous Polymerization:	No
Sensitive to Mechanical Impact:	No
Sensitive to Static Discharge:	Yes
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
Distillates (Petroleum), Hydrotreated Light Naphthenic, Low Flash	LD50 Oral Rat > 5000 mg/kg LD50 Dermal Rabbit > 2000 mg/kg
Distillates (petroleum), hydrotreated light paraffinic	
Distillates (Petroleum), Hydrotreated Light	LD50 Oral Rat > 2000 mg/kg LD50 Dermal Rabbit > 2000 mg/kg

Routes of Exposure:

Exposure will most likely occur through skin contact or inhalation.

Formulation:

No data is specifically available for this product and therefore this toxicological

Irritancy:	information is based on data available for the ingredients. This product is not a primary skin irritant after exposure of short duration, is not a skin sensitizer and is not irritating to the eyes.
Acute Toxicity:	This product is not expected to be irritating and has a low level of toxicity under normal use.
Chronic Effects:	Long term intensive exposure to oil mist may cause benign lung fibrosis. Prolonged or repeated contact may cause various forms of dermatitis including folliculitis and oil acne.

12. ECOLOGICAL INFORMATION

The immediate effect of a release is the physical impairment of the environment from the coating of surfaces, resulting in the disruption of oxygen, water and light to flora and fauna. 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.

Biodegradability:	Not readily biodegradable.
Bioaccumulation:	Potential for bioaccumulation. Potential for bioconcentration.
Partition Coefficient (log K_{ow}):	Not available
Aquatic Toxicity:	Product is expected to be toxic to aquatic organisms.

Ingredient:	Toxicological Data
Distillates (Petroleum), Hydrotreated Light Naphthenic, Low Flash	
Distillates (petroleum), hydrotreated light paraffinic	
Distillates (Petroleum), Hydrotreated Light	LL50 (WAF method) Rainbow Trout (96hr) 1 - 10 mg/L. EL50 (WAF method) Daphnia Magna (48hr) 1 - 10 mg/L. EL50 - growth rate (WAF method) Algae (72hr) 1 - 10 mg/L.

Definition(s): LL and EL are the lethal loading concentration and effective loading concentration respectively. The concentration represents the amount of substance added to the system to obtain a toxic concentration. They replace the traditional LC and EC for low solubility substances.
WAF is the water accommodated fraction. A slightly soluble hydrocarbon is stirred into water and the insoluble portions are removed. The remaining solution is the water accommodated fraction.

13. DISPOSAL CONSIDERATIONS

Waste management priorities (depending on volumes and concentration of waste) are: 1. recycle (reprocess), 2. energy recovery 3. incineration, 4. disposal at a licenced waste disposal facility. Do not attempt to combust

waste on-site.

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

This product is not regulated under the Canadian Transportation of Dangerous Goods Regulations for transport by road and rail.

15. REGULATORY INFORMATION

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
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: Provincial criteria are likely and should be requested when notifying provincial authorities. No Canadian federal standard; however, for general discharge guidance, federal installations limited to 15 mg/L for total oil and grease.

16. OTHER INFORMATION**LABEL STATEMENTS**

Hazard Statement : Combustible Liquid.
Handling Statement: Eliminate all ignition sources.
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 2 Section 3 Section 4 Section 5 Section 6 Section 7 Section 8 Section 9 Section 10 Section 11 Section 12 Section 16