

1. Chemical Product and Company Identification

**Material Name:** Starvis Hydraulic Oil AW 46  
**Manufacturer:** Ocean State Oil  
123 Ocean State Drive  
North Kingstown, RI 02852  
**Emergency Telephone Number:** 800-554-4557

2. Composition/Information on Ingredients

Mixture of Highly refined mineral oils and additives CAS 64741-88-4 and/or 64742-54-7

3. Hazards Identification

**Health Hazards:** Not expected to be a health hazard when used under normal conditions  
**Principal Hazards:** **Eyes:** May cause eye irritation  
**Skin Contact:** Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.  
**Inhalation:** Under normal conditions of use, this is not expected to be a primary route of exposure.  
**Ingestion:** Low toxicity if swallowed

4. First Aid Measures

**General Information:** Not expected to be a health hazard when used under normal conditions.  
**Inhalation:** No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.  
**Skin Contact:** Remove contaminated clothing. Flush exposed area with water and follow by washing with soap. If persistent irritation occurs, obtain medical attention. When using high-pressure equipment, injection of product under the skin can occur. If high-pressure injuries occur, the casualty should be sent immediately to the hospital. Do not wait for symptoms to develop.  
**Eye Contact:** Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.  
**Ingestion:** In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.  
**Advice to Physician:** Treat symptomatically. High-pressure injection injuries require prompt surgical intervention and possible steroid therapy, to minimize tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anesthetics, and wide exploration is essential.

5. Fire Fighting Measures

Clear fire area of all non-emergency personnel

**Flash Point COC:** 400 F Min

**Upper/Lower Flammability or Explosion limits:** Not Determined

**Specific Hazards:** Hazardous combustion products may include

A complex mixture of airborne solid and liquid particulates and gases (smoke), carbon monoxide, unidentified organic and inorganic compounds.

**Extinguishing media:** Foam, water spray or fog. Dry chemical power, carbon dioxide, sand or earth may be used for small fires only.

**Unsuitable Extinguishing media:** Do not use water in a jet

**Protective Equipment for Firefighters:** Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. Accidental Release Measures:

Avoid contact with spilled or released material. Observe all relevant local and international regulations.

**Protective Measures:** Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.

**Clean Up Methods:** Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other absorbent material. Reclaim liquid directly or in an absorbent.

**Additional Advice:** Local authorities should be advised if significant spillages cannot be contained.

7. Handling and Storage:

**General Precautions:** Use local exhaust ventilation if there is a risk of inhalation of vapors, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

**Handling:** Avoid prolonged or repeated contact with skin. Avoid inhaling vapor and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Do not cut, weld, braze, or solder or expose container to heat, flame, or other sources of ignition.

**Storage:** Keep container tightly closed in a dry, cool, well-ventilated place. Use properly labeled and closeable containers.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits

Material	Source	Type	Ppm	Mg/m3	Notation
Oil Mist mineral	ACGIH	TWA (Mist)		5mg/m3	
Oil Mist mineral	ACGIH	STEL (Mist)		10 mg/m3	

**Exposure Control:** The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

**Personal Protective Equipment:** Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

**Respiratory Protection:** No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapors.

**Hand Protection:** Where hand contact with the product may occur the use of gloves made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly.

**Eye Protection:** Wear safety glasses or full-face shield if splashes are likely to occur.

**Protective Clothing:** Skin protection not ordinarily required beyond standard issue work clothes.

**Monitoring Methods:** Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

**Environmental Exposure Controls:** Minimize release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

## 9. Physical and Chemical Properties

**Appearance:** Pale amber liquid

**Odor:** Slight Hydrocarbon

**PH:** Not applicable

**Initial Boiling Point and Boiling Range:** 536 F (estimated value)

**Pour Point:** -25 F Typical

**Flash Point:** 400 F Min

**Upper/lower Flammability or Explosion limits:** Not determined

**Specific Gravity:** 0.87

**Water Solubility:** Nil

**Vapor density (Air =1):** >1 (estimated value)

**Evaporation Rate:** 1000 times slower than ethyl ether

## 10. Stability and Reactivity

**Stability:** Stable

**Conditions to Avoid:** Extremes of temperature

**Materials to Avoid:** Strong oxidizing agents

**Hazardous Decomposition Products:** Hazardous decomposition products are not expected to form during normal storage.

## 11. Toxicological Information

**Basis for Assessment:** Information given is based on data on the components and the toxicology of similar products.

**Acute Oral Toxicity:** Expected to be of low toxicity: LD 50>5000 mg/kg, Rat

**Acute Dermal Toxicity:** Expected to be of low toxicity: LD 50>5000 mg/kg, Rabbit

**Acute Inhalation Toxicity:** Not considered to be an inhalation hazard under normal conditions of use.

**Skin Irritation:** Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

**Eye Irritation:** Expected to be slightly irritating.

**Respiratory Irritation:** Inhalation of vapors or mists may cause irritation.

**Sensitization:** Not expected to be a skin sensitizer.

**Repeated Dose Toxicity:** Not expected to be a hazard.

**Mutagenicity:** Not considered a mutagenic hazard

**Carcinogenicity:** Product contains mineral oils of types shown to be non-carcinogenic in animal skin painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects:

**Reproductive and Developmental Toxicity Additional Information:** Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. All used oil should be handled with caution and skin contact avoided as far as possible.

## 12. Ecological Information

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

**Acute Toxicity:** Not a soluble mixture. May cause physical fouling of aquatic organisms.

**Mobility:** Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.

**Persistence/Degradability:** Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.

**Other Adverse Effects:** Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential, or global warming potential.

**13. Disposal Considerations**

**Material Disposal:** Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or water courses.

**Container Disposal:** Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.

**Local Legislation:** Disposal should be in accordance with applicable regional, national, and local laws and regulations.

**14. Transport Information**

**US Department of Transportation Classification (49CFR)**

This material is not subject to DOT regulations under 49 CFR parts 171-180

**IMDG**

This material is not classified as dangerous under IMDG regulations.

**IATA (Country variations may apply)**

This material is not classified as dangerous under IATA regulations.

**15. Regulatory Information**

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

**Federal Regulatory Status**

**Notification Status:**

<b>EINECS</b>	All components listed or polymer exempt
<b>TSCA</b>	All components listed
<b>DSL</b>	All components listed

**SARA Hazard Categories (311/312)**

No SARA 311/312 Hazards

**State Regulatory Status**

California Safe Drinking Water and Toxic Enforcement Act (Proposition 85)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

**16. Other Information:**

**NFPA Rating (Health, Fire, Reactivity): 0,1,0**

**Disclaimer:** The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of this product.