

# Material Safety Data Sheet

ENVIRON™ AW 32, 46, 68



## 1. Product and company identification

- Product name** : ENVIRON™ AW 32, 46, 68
- Code** : ENVAW32, 490-130; ENVAW46, 490-131; ENVAW68, 490-132
- Material uses** : ENVIRON AW ashless hydraulic oils are designed for use in mobile and stationary hydraulic equipment using vane-, piston- and gear-type pumps. The ashless, or zinc-free, additive system used in ENVIRON AW oils makes them especially suitable for use in environmentally sensitive areas. They are well suited for high pressure applications such as found in axial piston pumps.
- Manufacturer** : Petro-Canada Lubricants Inc.  
2310 Lakeshore Road West  
Mississauga, Ontario  
Canada L5J 1K2
- In case of emergency** : Suncor Energy: 403-296-3000  
Canutec Transportation: 613-996-6666  
Poison Control Centre: Consult local telephone directory for emergency number(s).

## 2. Hazards identification

- Physical state** : Viscous liquid.
- Odour** : Mild petroleum oil like.
- WHMIS (Canada)** : Not controlled under WHMIS (Canada).
- OSHA/HCS status** : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
- Emergency overview** : No specific hazard.
- Routes of entry** : Dermal contact. Eye contact. Inhalation. Ingestion.
- Potential acute health effects**
- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.
- Skin** : Slightly irritating to the skin.
- Eyes** : Slightly irritating to the eyes.
- Potential chronic health effects**
- Chronic effects** : No known significant effects or critical hazards.
- Carcinogenicity** : Not listed as carcinogenic by OSHA, NTP or IARC.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Medical conditions aggravated by over-exposure** : Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated skin exposure can produce local skin destruction or dermatitis.
- See toxicological information (Section 11)**

### 3 . Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
Mixture of severely hydrotreated and hydrocracked base oil (petroleum).	Mixture	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

The base oil may be a mixture of the following CAS#s: 8042-47-5, 64742-46-7, 64742-47-8, 64742-53-6, 64742-54-7, 64742-55-8, 72623-84-8, 72623-85-9, 72623-86-0, 72623-87-1, 178603-64-0, 178603-65-1, 178603-66-2, 445411-73-4

### 4 . First-aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

### 5 . Fire-fighting measures

- Flammability of the product** : May be combustible at high temperature.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Products of combustion** : Carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>), sulphur compounds (H<sub>2</sub>S), silicon oxides (SiO<sub>x</sub>), phosphorus oxides (PO<sub>x</sub>), diphenylamine, alkenes, aldehydes, smoke and irritating vapours as products of incomplete combustion.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Special remarks on fire hazards** : Low fire hazard. This material must be heated before ignition will occur.
- Special remarks on explosion hazards** : Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

## 6 . Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## 7 . Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

## 8 . Exposure controls/personal protection

Ingredient	Exposure limits
Mixture of severely hydrotreated and hydrocracked base oil (petroleum).	<b>ACGIH TLV (United States). Notes: (Mineral oil)</b> TWA: 5 mg/m <sup>3</sup> , (Inhalable fraction) 8 hour(s).

### Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

## 8 . Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour filter
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.  
Recommended: neoprene, nitrile, polyvinyl alcohol (PVA), Viton®.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## 9 . Physical and chemical properties

- Physical state** : Viscous liquid.
- Flash point** : Open cup:  $\geq 230^{\circ}\text{C}$  ( $>446^{\circ}\text{F}$ ) [Cleveland.]
- Auto-ignition temperature** : Not available.
- Flammable limits** : Not available.
- Colour** : Pale, straw-yellow.
- Odour** : Mild petroleum oil like.
- Odour threshold** : Not available.
- pH** : Not available.
- Boiling/condensation point** : Not available.
- Melting/freezing point** : Not available.
- Relative density** : 0.859 to 0.8695 kg/L @  $15^{\circ}\text{C}$  ( $59^{\circ}\text{F}$ )
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Volatility** : Not available.
- Evaporation rate** : Not available.
- Viscosity** : **32:** 32.8 cSt @  $40^{\circ}\text{C}$  ( $104^{\circ}\text{F}$ ), 5.4 cSt @  $100^{\circ}\text{C}$  ( $212^{\circ}\text{F}$ ), VI=101; **46:** 46.1 cSt @  $40^{\circ}\text{C}$  ( $104^{\circ}\text{F}$ ), 6.79 cSt @  $100^{\circ}\text{C}$  ( $212^{\circ}\text{F}$ ), VI=101; **68:** 67.4 cSt @  $40^{\circ}\text{C}$  ( $104^{\circ}\text{F}$ ), 8.74 cSt @  $100^{\circ}\text{C}$  ( $212^{\circ}\text{F}$ ), VI=101
- Pour point** : **32:**  $-45^{\circ}\text{C}$  ( $-49^{\circ}\text{F}$ ); **46:**  $-42^{\circ}\text{C}$  ( $-44^{\circ}\text{F}$ ); **68:**  $-33^{\circ}\text{C}$  ( $-27^{\circ}\text{F}$ )
- Solubility** : Insoluble in water.

## 10 . Stability and reactivity

- Chemical stability** : The product is stable.
- Hazardous polymerisation** : Under normal conditions of storage and use, hazardous polymerisation will not occur.
- Materials to avoid** : Reactive with reducing agents, oxidising agents, alkalis and acids.
- Hazardous decomposition products** : May release CO<sub>x</sub>, H<sub>2</sub>S, methacrylate monomers, aldehydes, alkyl mercaptans, sulfides, smoke and irritating vapours when heated to decomposition.

## 11 . Toxicological information

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Mixture of severely hydrotreated and hydrocracked base oil (petroleum).	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>5.2 mg/l	4 hours

**Conclusion/Summary** : Not available.

### Chronic toxicity

**Conclusion/Summary** : Not available.

### Irritation/Corrosion

**Conclusion/Summary** : Not available.

### Sensitiser

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Mixture of severely hydrotreated and hydrocracked base oil (petroleum).	A4	-	-	-	-	-

### Mutagenicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

## 12 . Ecological information

**Environmental effects** : No known significant effects or critical hazards.

### Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
ENVIRON™ AW 32, 46, 68	OECD 202	EC50 >10000 mg/l	Daphnia - Daphnia magna	48 hours
	OECD 209	EC50 >10000 ppm	Sludge - Activated sludge (respiration inhibition)	3 hours
	Acute lethality test	LC50 >20000 µL/L	Fish - Rainbow trout (Oncorhynchus mykiss)	96 hours

**Conclusion/Summary** : Not available.

### Biodegradability

## 12 . Ecological information

- Conclusion/Summary** : This product is inherently biodegradable.
- Other adverse effects** : No known significant effects or critical hazards.

## 13 . Disposal considerations

- Waste disposal** : The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## 14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>TDG Classification</b>	Not regulated.	-	-	-		-
<b>DOT Classification</b>	Not available.	Not available.	Not available.	-		-

PG\* : Packing group

## 15 . Regulatory information

### United States

- HCS Classification** : Not regulated.

### Canada

- WHMIS (Canada)** : Not controlled under WHMIS (Canada).

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

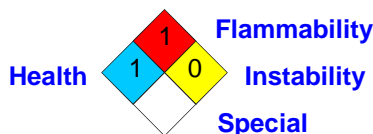
### International regulations

- Canada inventory** : All components are listed or exempted.
- United States inventory (TSCA 8b)** : All components are listed or exempted.
- Europe inventory** : All components are listed or exempted.
- International lists** :
- Australia inventory (AICS)**: All components are listed or exempted.
  - China inventory (IECSC)**: All components are listed or exempted.
  - Korea inventory**: All components are listed or exempted.
  - Philippines inventory (PICCS)**: All components are listed or exempted.

## 16 . Other information

Hazardous Material Information System (U.S.A.) :	Health	1
	Flammability	1
	Physical hazards	0
	Personal protection	B

National Fire Protection Association (U.S.A.) :



References : Available upon request.  
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Responsible name : Product Safety - RS

Indicates information that has changed from previously issued version.

**For Copy of (M)SDS** : The Canadian Controlled Products Regulations (CPR) (Under the Hazardous Products Act, part of the WHMIS legislation) only apply to WHMIS Controlled (i.e., hazardous) products. Therefore, the CPR and the 3-year update rule specified therein do not apply to WHMIS Non-Controlled products. Although this is true, customarily Petro-Canada reviews and updates Non-Controlled product MSDS if a customer requests such an update. These Non-Controlled product updates are given a lower priority than Controlled products but are handled as soon as practicable. If you would like to verify if the MSDS you have is the most current, or you require any further information, please contact:

Internet: [lubricants.petro-canada.ca/msds](http://lubricants.petro-canada.ca/msds)

Lubricants:

Western Canada, telephone: 1-800-661-1199; fax: 1-800-378-4518

Ontario & Central Canada, telephone: 1-800-268-5850; fax: 1-800-201-6285

Quebec & Eastern Canada, telephone: 1-800-576-1686; fax: 1-800-201-6285

For Product Safety Information: (905) 804-4752

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.