

SAFETY DATA SHEET

ENVIRON™ AW 46



1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Identification of the substance or mixture

- Product name** : ENVIRON™ AW 46
Code : ENVAW46
Use of the substance/mixture : 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.

Company/undertaking identification

- Manufacturer** : Petro-Canada Lubricants Inc.
2310 Lakeshore Road West
Mississauga, Ontario
Canada L5J 1K2
- Supplier** : Petro-Canada Europe Lubricants Limited
Wellington House, Starley Way
Birmingham International Park
Solihull
B37 7HB, United Kingdom
Tel: +44 (0) 121 781 7264
Fax: +44 (0) 121 781 7401
- e-mail address of person responsible for this SDS** : EUSDS@suncor.com
- Emergency telephone number** : Suncor Energy: (001) 403-296-3000
Canutec Transportation: (001) 613-996-6666
Poison Control Centre: Consult local telephone directory for emergency number(s).

2. HAZARDS IDENTIFICATION

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Not classified.

See Section 11 for more detailed information on health effects and symptoms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation : Mixture

Ingredient name	CAS number	%	EC number	Classification
Mixture of severely hydrotreated and hydrocracked base oil (petroleum).	Mixture	-	Mixture	Not classified. [2]

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.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

First-aid measures

- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4. FIRST AID MEASURES

- Skin contact** : Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.
- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See Section 11 for more detailed information on health effects and symptoms.

5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : In a fire or if heated, a pressure increase will occur and the container may burst. 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, CO₂), nitrogen oxides (NO_x), sulphur oxides (SO_x), silicon oxides (SiO_x), phosphorus oxides (PO_x), 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
- Remark** : 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. 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. 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. Dispose of via a licensed waste disposal contractor.

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.
- 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.

7. HANDLING AND STORAGE

Packaging materials

Recommended : Use original container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values

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

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. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Exposure controls

Occupational exposure controls : 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.

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.

Respiratory protection : 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

Hand protection : 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®.

Eye protection : 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 protection : 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

General information

Appearance

Physical state : Viscous liquid.
Colour : Pale, straw-yellow.
Odour : Mild petroleum oil like.

Important health, safety and environmental information

Flash point : Open cup: 233°C (451.4°F) [Cleveland.]
Relative density : 0.8674 kg/L @ 15°C (59°F)
Solubility : Insoluble in water.
Viscosity : 45.4 cSt @ 40°C (104°F), 6.8 cSt @ 100°C (212°F), VI=104
Pour point : -33°C (-27°F)

10. STABILITY AND REACTIVITY

- Chemical stability** : The product is stable.
- Materials to avoid** : Reactive with reducing agents, oxidising agents and acids.
- Hazardous decomposition products** : May release CO_x, H₂S, methacrylate monomers, aldehydes, alkyl mercaptans, sulfides, smoke and irritating vapours when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Potential acute health effects

- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Eye contact** : No known significant effects or critical hazards.

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.

Potential chronic health effects

Chronic toxicity

- Conclusion/Summary** : Not available.

Irritation/Corrosion

- Conclusion/Summary** : Not available.

Sensitiser

- Conclusion/Summary** : Not available.

Carcinogenicity

- Conclusion/Summary** : Not available.

Mutagenicity

- Conclusion/Summary** : Not available.

Teratogenicity

- Conclusion/Summary** : Not available.

Reproductive toxicity

- Conclusion/Summary** : Not available.

- 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.

Over-exposure signs/symptoms

- Inhalation** : No specific data.

- Ingestion** : No specific data.

- Skin** : No specific data.

- Eyes** : No specific data.

12. ECOLOGICAL INFORMATION

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

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
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12. ECOLOGICAL INFORMATION

ENVIRON™ AW 46	OECD 202	EC50 >10000 mg/l	Daphnia - Daphnia magna	48 hours
	OECD 209	EC50 >10000 ppm	Algae - Activated sludge (respiration inhibition)	3 hours
	-	LC50 >20000 mg/l	Fish - Rainbow trout (Oncorhynchus mykiss)	96 hours

Conclusion/Summary : Not available.

Biodegradability

Conclusion/Summary : This product is inherently biodegradable.

Other adverse effects : No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Methods of 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. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

14. TRANSPORT INFORMATION**International transport regulations**

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADR/RID Class	Not available.	Not available.	Not available.	-		-
ADN/ADNR Class	Not available.	Not available.	Not available.	-		-
IMDG Class	Not available.	Not available.	Not available.	-		-
IATA Class	Not available.	Not available.	Not available.	-		-

PG* : Packing group

15. REGULATORY INFORMATION**EU regulations**

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

Risk phrases : This product is not classified according to EU legislation.

Other EU regulations

Additional warning phrases : Safety data sheet available for professional user on request.

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.

15. REGULATORY INFORMATION

- International lists**
- : **Australia inventory (AICS):** All components are listed or exempted.
 - : **China inventory (IECSC):** All components are listed or exempted.
 - : **Japan inventory:** 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

- Key data sources** : Available upon request.
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History

- Date of printing** : 11/20/2013.
- Date of issue/ Date of revision** : **20 November 2013**
- Date of previous issue** : **No previous validation.**
- Prepared by** : **Product Safety - KKB**

✔ Indicates information that has changed from previously issued version.

- For Copy of (M)SDS** : Internet: lubricants.petro-canada.ca/msds

Lubricants:

Western Canada, telephone: (001) 800-661-1199; fax: (001) 800-378-4518

Ontario & Central Canada, telephone: (001) 800-268-5850; fax: (001) 800-201-6285

Quebec & Eastern Canada, telephone: (001) 800-576-1686; fax: (001) 800-201-6285

For Product Safety Information: (001) 905-804-4752

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