

# SAFETY DATA SHEET

HYDREX\* AW 22, 32, 46, 68, 80, 100

## 1. Identification of the substance/preparation and company/undertaking

### Identification of the substance or preparation

- Product name** : HYDREX\* AW 22, 32, 46, 68, 80, 100
- Use of the substance/preparation** : These products are designed for use as heavy duty hydraulic power transmission fluids and for lubrication where good anti-wear and anti-oxidation properties are required. They would typically be used in high-pressure hydraulic systems, machine tools, presses, compressors, pumps, gear sets, and centralized bearing lubrication systems.

### Company/undertaking identification

- Manufacturer** : MULAG Fahrzeugwerk  
Heinz Wössner GmbH u. Co. KG  
Gewerbestrasse 8  
77728 Oppenau  
Germany  
Tel +49-(0)7804-913-0  
Fax +49-(0)7804-913-149
- Supplier** : Not available.
- Emergency telephone number** : Tel +49-(0)761- 192 40  
Vergiftungs-Informations-Zentrale Freiburg

## 2. Composition/information on ingredients

- Substance/preparation** : Preparation

Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring reporting in this section, in accordance with EU or national regulations.

## 3. Hazards identification

The preparation 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.

## 4. First-aid measures

- Inhalation** : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
- Ingestion** : Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Obtain medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

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.
- Hazardous thermal decomposition products** : Carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>), phosphorus compounds (PO<sub>x</sub>), calcium oxides (CaO<sub>x</sub>), zinc oxides (ZnO<sub>x</sub>), aldehydes, ketones, hydrocarbons, 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.
- 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. 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** : 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** : Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk. Evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapour/spray. If ingested, seek medical advice immediately and show the container or the label.
- Storage** : Keep container tightly closed. Store away from incompatible materials (see section 10). Keep container in a cool, well-ventilated area.
- Packaging materials**
- Recommended** : Use original container.

## 8. Exposure controls/personal protection

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
Mixture of severely hydrotreated and hydrocracked base oil (petroleum).	<b>ACGIH TLV (United States). Notes: (oil mist)</b> TWA: 5 mg/m <sup>3</sup> 8 hour(s). STEL: 10 mg/m <sup>3</sup> 15 minute(s).
<b>Recommended monitoring procedures</b>	: 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

## 8. Exposure controls/personal protection

- 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.
- 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, gases 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.  
  
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.
- 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

- Colour** : Pale, straw-yellow.
- Odour** : Mild petroleum oil like.

### Important health, safety and environmental information

- Flash point** : Open cup:  $\geq 207^{\circ}\text{C}$  ( $>404.6^{\circ}\text{F}$ ) [Cleveland.]
- Relative density** : 0.8587 to 0.8728 kg/L @  $15^{\circ}\text{C}$  ( $59^{\circ}\text{F}$ )
- Solubility** : Insoluble in water.
- Viscosity** : **22**: 21.59 cSt @  $40^{\circ}\text{C}$ , 4.26 cSt @  $100^{\circ}\text{C}$ , VI=101; **32**: 34.5 cSt @  $40^{\circ}\text{C}$ , 5.68 cSt @  $100^{\circ}\text{C}$ , VI=103; **46**: 46.6 cSt @  $40^{\circ}\text{C}$ , 6.94 cSt @  $100^{\circ}\text{C}$ , VI=105; **68**: 65.7 cSt @  $40^{\circ}\text{C}$ , 9.4 cSt @  $100^{\circ}\text{C}$ , VI=115; **80**: 80.0 cSt @  $40^{\circ}\text{C}$ , 9.71 cSt @  $100^{\circ}\text{C}$ , VI=99; **100**: 100.0 cSt @  $40^{\circ}\text{C}$ , 11.32 cSt @  $100^{\circ}\text{C}$ , VI=99
- Softening Point** : Not available.
- Dropping Point** : Not available.
- Penetration** : Not available.
- Pour Point** : 22:  $-45^{\circ}\text{C}$  ( $-49^{\circ}\text{F}$ )  
32:  $-39^{\circ}\text{C}$  ( $-38^{\circ}\text{F}$ )  
46:  $-33^{\circ}\text{C}$  ( $-27^{\circ}\text{F}$ )  
68:  $-33^{\circ}\text{C}$  ( $-27^{\circ}\text{F}$ )  
80:  $-24^{\circ}\text{C}$  ( $-11^{\circ}\text{F}$ )  
100:  $-30^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$ )

## 10. Stability and reactivity

- Stability** : The product is stable.
- Materials to avoid** : Reactive with oxidizing materials and acids .
- Hazardous decomposition products** : May release CO<sub>x</sub>, H<sub>2</sub>S, methacrylate monomers, aldehydes, alkyl mercaptans, hydrocarbons, 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.

### Potential chronic health effects

- Carcinogenicity** : Not listed as carcinogenic by OSHA, NTP or IARC.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

### Over-exposure signs/symptoms

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

## 12. Ecological information

### Ecotoxicity data

<u>Product/ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
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### Other ecological information

#### Persistence/degradability

<u>Product/ingredient name</u>	<u>BOD<sub>5</sub></u>	<u>COD</u>	<u>ThOD</u>
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<u>Product/ingredient name</u>	<u>Aquatic half-life</u>	<u>Photolysis</u>	<u>Biodegradability</u>
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#### Bioaccumulative potential

<u>Product/ingredient name</u>	<u>LogP<sub>ow</sub></u>	<u>BCF</u>	<u>Potential</u>
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**Mobility** : Not available.

**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. 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. 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

## 14. Transport information

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

PG\* : Packing group

## 15. Regulatory information

### EU regulations

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

**Product use** : Consumer applications.

### Other EU regulations

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

### International regulations

#### International lists

Canada inventory status : Listed

EC INVENTORY (EINECS/ELINCS) : Listed

TSCA 8(b) inventory : Listed

## 16. Other information

**Key data sources** : Available upon request.  
\* Marque de commerce de Petro-Canada - Trademark

### History

**Date of printing** : 12/27/2006.

**Date of issue** : 12/27/2006.

**Date of previous issue** : No previous validation.

**Version** : 1

Indicates information that has changed from previously issued version.

**For Copy of (M)SDS** : [www.mulag.com](http://www.mulag.com)

#### Lubricants:

Western Canada, telephone: (001) 1-800-661-1199; fax: (001) (780) 464-9564

Ontario & Central Canada, telephone: (001) 1-800-268-5850 and (001) (905) 822-4222; fax: (001) 1-800-201-6285

Quebec & Eastern Canada, telephone: (001) 1-800-576-1686; fax: (001) 1-800-201-6285

For Product Safety Information: (001) 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.**