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- 1 Identification of the substance/mixture and of the company/undertaking
- Product identifier
- Trade name: MARINE RENOLIN B 150 HVI 20L PLA
- · Relevant identified uses of the substance or mixture and uses advised against

No uses advised against identified.

- · Application of the substance / the preparation: Hydraulic fluid
- · Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

FUCHS EUROPE SCHMIERSTOFFE GMBH EXPORT DIVISION

Friesenheimer Str. 19

D-68169 Mannheim

Tel: ++49 (0)621/3701-0 (Switch Board)

Fax: ++49 (0)621/3701-570

· Informing department:

Product safety department

Tel: +49 (0)621 3701-1333 or -1313

Fax: 0621/3701-7303

E-Mail: Produktsicherheit@fuchs-europe.de

· Emergency telephone number:

Tel: +49 (0)621 3701-1333 or +49 (0)621 3701-0 (Switch Board)

- 2 Hazards identification
- #Classification# of the substance or mixture
- · Classification according to #Directive 67/548/EEC or Directive 1999/45/EC#

By handling of mineral oil products and chemical products no particular hazard is known when normal precautions (item 7) and personal protective equipment (item 8) are kept.

The product is not classified according to Directive 67/548/EEC or Directive 1999/45/EC

· Void

· Information concerning particular hazards for human and environment: This product is water polluting; see item 12.

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- · #Label# elements
- · Labelling according to EU guidelines:

Observe the normal safety regulations when handling chemicals or mineral oil products.

The product is not subject to identification regulations under EC Directives until 2008/1272/EC (1. CLP-ATP). Local regulations must be kept.

Other hazards

(Contd. on page 2)

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+----Trade name: MARINE RENOLIN B 150 HVI 20T PTA +-----(Contd. of page 1) · Results of PBT and vPvB assessment Not applicable. vPvB: Not applicable. ______ 3 Composition/information on ingredients · Chemical characterization: Mixtures · Description: Mixture containing severely refined base oils and additives. Dangerous components / Hazard communications / Concentration range % ZnDTP 0.1-1 %Xi R41; N R51/53 EINECS: 224-235-5 Alkylated phenol 0.1-1 % N R51/53 EINECS: 204-884-0 Additional information For the wording of the listed risk phrases refer to section 16. 4 First aid measures · Description of first aid measures · General information Change clothes and shoes contaminated or soaked by the product. Never put rags contaminated by the product into cloth-pockets. · After inhalation Seek medical treatment in case of complaints. · After skin contact The product is not skin irritating. · After eye contact Rinse opened eye for several minutes under running water. · After swallowing Seek medical treatment. Information for doctor · Most important symptoms and effects, both acute and delayed · No further relevant information available. · Indication of any immediate medical attention and special treatment needed · No further relevant information available. 5 Firefighting measures · Extinguishing media · Suitable extinguishing agents CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam. Use fire fighting measures that suit the environment. · For safety reasons unsuitable extinguishing agents Water with a full water jet. (Contd. on page 3) -----GB-+

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(Contd. of page 2)

- Special hazards arising from the substance or mixture
 No further relevant information available.
- · Advice for firefighters
- \cdot Protective equipment:

In case of fire fighting: wear self containing breathing apparatus

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Particular danger of slipping on leaked/ spilled product.
- · Environmental precautions:
 - Do not allow to enter drainage system, surface or ground water. Prevent from spreading (e.g. by binding or oil barriers). Do not allow to enter the ground/ soil.
- Methods and material for containment and cleaning up:
 Absorb with liquid-binding material (sand, diatomite, acid binders,
 universal binders, sawdust).
 - Dispose of the material collected according to regulations.
- · Reference to other sections
 - No dangerous materials are released.

7 Handling and storage

- · Handling
- · Precautions for safe handling Prevent formation of aerosols.
- Information about protection against explosions and fires: Do not heat up to temperatures close to the flash point.
- · Conditions for safe storage, including any incompatibilities
- · Storage
- Requirements to be met by storerooms and containers:
 No special requirements.
- Information about storage in one common storage facility: Store away from foodstuffs.
- Further information about storage conditions: Local regulations concerning handling and storage of water polluting products have to be followed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems:
 No further data; see item 7.
- Control parameters
- · Components with critical values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with TLVs / WELs that have to be monitored at the workplace.

(Contd. on page 4)

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Trade name: MARINE RENOLIN B 150 HVI 20L PLA

The lists that were valid during the compilation were used as basis.

(Contd. of page 3)

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• Exposure controls

· Additional information:

- · Personal protective equipment
- · General protective and hygienic measures

The usual precautionary measures should be adhered to in handling the chemicals and the mineral oil products.

Avoid close or long term contact with the skin.

Use skin protection cream for preventive skin protection.

Breathing equipment: Not required.

- · Protection of hands: Protective gloves and protective skin cream.
- · Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· For the permanent contact gloves made of the following materials are

suitable:

Nitrile rubber, NBR

Neoprene gloves

 \cdot Not suitable are gloves made of the following materials: Butyl rubber, BR

Natural rubber, NR

- · Eye protection: Safety glasses recommended during refilling.
- · Body protection: Protective work clothing.
- 9 Physical and chemical properties
- · Information on basic physical and chemical properties
- General Information
- · Appearance:
- · Form: Fluid
- · Colour: Yellow
- · Smell: Characteristic

Value/Range Unit Method

· Change in condition

Melting point/Melting range: Not determinedBoiling point/Boiling range: not applicable or not determined

· Flash point: 260 ° C EN ISO 2592

· Ignition temperature:

(Contd. on page 5)

Revision: 04.07.2011 Trade name: MARINE RENOLIN B 150 HVI 20L PLA +-----(Contd. of page 4) · Decomposition temperature: Not determined Product is not selfigniting. Self-inflammability: · Danger of explosion: Product is not explosive. at 15 ° C 0.881 g/cm³ DIN 51 757 Density · Solubility in / Miscibility with Not miscible or difficult to mix · Water: · Viscosity or Consistency-Class: at 40 ° C · kinematic: $152 \text{ mm}^2/\text{s}$ DIN 51 562 · Other information No further relevant information available. 10 Stability and reactivity · Reactivity · Chemical stability · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications. · Possibility of hazardous reactions No dangerous reactions known · Conditions to avoid No further relevant information available. · Incompatible materials: No further relevant information available. · Hazardous decomposition products: No dangerous decomposition products known -----11 Toxicological information · Information on toxicological effects · Acute toxicity: · Primary irritant effect: · on the skin: No irritant effect known. $\boldsymbol{\cdot}$ on the eye: No irritant effect known. · Sensitization: No sensitizing effect known. · Additional toxicological information: The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version. When used and handled according to specifications, the product does not have any harmful effects according to our actual informations. 12 Ecological information

· Toxicity
Aquatic toxicity:

No further relevant information available.

(Contd. on page 6) |

(Contd. on page 7)

Safety data sheet according to 1907/2006/EC, Article 31

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Trade name: MARINE RENOLIN B 150 HVI 20T PTA +-----(Contd. of page 5) · Persistence and degradability · No further relevant information available. · Behaviour in environmental systems: \cdot Bioaccumulative potential No data available · Mobility in soil No further relevant information available. · Ecotoxical effects: · Behaviour in sewage processing plants: The product swims on the water surface. · Additional ecological information: · General notes: German Water Endangering Class 1 (Self-assessment): slightly hazardous for water. Do not allow to reach ground water, water bodies or sewage system. · Results of PBT and vPvB assessment Not applicable. vPvB: Not applicable. · Other adverse effects No further relevant information available. 13 Disposal considerations · Waste treatment methods · Recommendation Smaller quantities have to be disposed in line with local legislation. When storing used mineral oil products, ensure that the categories for waste oil and mixing instructions are observed. Delivery of waste oil only to offically authorized collectors. · European waste catalogue 13 01 10*: mineral based non-chlorinated hydraulic oils · Uncleaned packagings: · Recommendation: Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Small one-way packagings have to be disposed according to the local regulations. EWC 15 01 02 bzw. 15 01 04. 14 Transport information · UN-Number ADR ADN IMDG · IATA \cdot UN proper shipping name · ADR ADN

(Contd. on page 8)

Safety data sheet according to 1907/2006/EC, Article 31

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Trade name: MARINE RENOLIN B 150 HVI 20T PTA +-----(Contd. of page 6) · IMDG · IATA Transport hazard class(es) ADR · Class · ADN/R Class: · IMDG · Class · IATA · Class · Packing group · ADR · IMDG • IATA · Environmental hazards: · Marine pollutant: No · Special precautions for user Not applicable. • Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code · Not applicable. \cdot Transport/Additional information: No dangerous good acc. to dangerous goods/ transport directions. 15 Regulatory information · Safety, health and environmental regulations/legislation specific for the substance or mixture · National regulations · German Water Hazard Class: Water Engangering Class 1 (Self-assessment): slightly hazardous for water. · Other regulations, limitations and prohibitive regulations Substances of very high concern (SVHC) according to REACH, Article 31 out of the recent list: none ______ 16 Other information All ingredients are listed in the European Inventories. These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. This data sheet is a safety data sheet according to 1907/2006/EC, article 31. For products which are not subject to classification according to EU lists this data sheet is made on a voluntary base. · Relevant phrases R41 Risk of serious damage to eyes. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects

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Trade name: MARINE RENOLIN B 150 HVI 20L PLA (Contd. of page 7)

in the aquatic environment.

 Department issuing data specification sheet: FUCHS EUROPE SCHMIERSTOFFE GMBH Export Division Product Safety Departement

· Contact:

Product Safety Departement:

Tel: +49(0)621 3701-1333 Frau Ehrenfeld

· Validity:

With this latest edition of this MSDS all former editions are not valid any longer.

Changed items are marked with "*".

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