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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

LHM+

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### Use of the substance/mixture

Hydraulic fluid

### 1.3. Details of the supplier of the safety data sheet

Company name: Robert Bosch GmbH

Street: Auf der Breit 4

Place: D-76227 Karlsruhe

Telephone: +49 721-942-0

Service Deutschland: 0 900 1 942 010-5

Responsible for the safety data sheet: sds@gbk-ingelheim.de

**1.4. Emergency telephone number:** INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)  
England and Wales: NHS Direct - 0845 4647; Scotland: NHS 24 - 08454 24 24  
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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

This mixture is not classified as hazardous according to Directive 1999/45/EC.

#### GHS classification

This mixture is not classified as hazardous according to Regulation (EC) No. 1272/2008.

### 2.2. Label elements

#### Additional advice on labelling

The product does not require a hazard warning label in accordance with EC directives/the relevant national laws.

### 2.3. Other hazards

High risk of slipping due to leakage/spillage of product.

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## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Hydraulic fluid

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## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Remove contaminated soaked clothing immediately.

#### After inhalation

Ensure of fresh air.

#### After contact with skin

In case of contact with skin wash off with soap and water.

#### After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

If eye irritation persists, consult a specialist.

#### After ingestion

Do not induce vomiting.

Seek medical treatment immediately.

### 4.2. Most important symptoms and effects, both acute and delayed

Contact with eyes may cause irritation.

Frequent persistent contact with the skin may cause skin irritation.



Ingestion causes irritation to the respiratory system and gastrointestinal disturbance.  
Attention. Beware, danger of aspiration.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptoms.

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**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Foam, carbon dioxide (CO<sub>2</sub>), dry chemical, water-spray.

**Unsuitable extinguishing media**

Full water jet.

**5.2. Special hazards arising from the substance or mixture**

Fire may produce:

Carbon monoxide, carbon dioxide, sulphur oxides and nitrogen oxides (NO<sub>x</sub>).

**5.3. Advice for firefighters**

In case of fire, wear suitable respiratory equipment with positive air supply.

Protective suit.

**Additional information**

Cool containers at risk with water spray jet.

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

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**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

Use personal protective clothing.

High risk of slipping due to leakage/spillage of product.

**6.2. Environmental precautions**

Do not discharge into the drains/surface waters/ground water.

Do not discharge into the subsoil/soil.

**6.3. Methods and material for containment and cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).

Shovel into suitable container for disposal.

**6.4. Reference to other sections**

Information for disposal see section 13.

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**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

Avoid contact with skin, eyes and clothing.

Ensure adequate ventilation.

When using do not eat, drink or smoke.

**Advice on protection against fire and explosion**

No special protective measures against fire required.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep container tightly closed in a dry, cool and well-ventilated place.

**Advice on storage compatibility**

Do not store with oxidizing agents.

**Further information on storage conditions**

Keep away from food, drink and animal feeding stuffs.

**7.3. Specific end use(s)**

Hydraulic fluid



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## **SECTION 8: Exposure controls/personal protection**

### **8.1. Control parameters**

### **8.2. Exposure controls**

#### **Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.

#### **Protective and hygiene measures**

Wash hands before breaks and after work.

Take off immediately all contaminated clothing.

Avoid contact with skin, eyes and clothing.

When using, do not eat, drink or smoke.

Use barrier skin cream.

#### **Eye/face protection**

During transferring safety goggles are recommended.

#### **Hand protection**

Short time contact: Solvent-resistant gloves (nitrile rubber).

Glove material must be impermeable and resistant against product / substance / preparation. Gloves material should comply with breakthrough times, permeation rates, and degradation.

Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

#### **Respiratory protection**

No personal respiratory protective equipment normally required.

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## **SECTION 9: Physical and chemical properties**

### **9.1. Information on basic physical and chemical properties**

Physical state:	Liquid
Colour:	Green
Odour:	characteristic
Initial boiling point and boiling range:	> 270 °C
Flash point:	> 115 °C
Lower explosion limits:	n.d.
Upper explosion limits:	
Vapour pressure: (at 20 °C)	0,1 hPa
Density (at 20 °C):	0,84 - 0,85 g/cm <sup>3</sup>
Water solubility:	Immiscible
Ignition temperature:	n.d.
Explosive properties:	The product is not explosive.

### **9.2. Other information**

No data available.

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## **SECTION 10: Stability and reactivity**

### **10.1. Reactivity**

No decomposition if suitable use.

### **10.2. Chemical stability**

Stable under normal conditions.

### **10.3. Possibility of hazardous reactions**

Reactions with oxidizing agents.

### **10.4. Conditions to avoid**

To avoid thermal decomposition, do not overheat.

### **10.5. Incompatible materials**

Strong oxidizing agents.



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## **10.6. Hazardous decomposition products**

Fire may produce:

Carbon monoxide, carbon dioxide, sulphur oxides, and nitrogen oxides (NOx).

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## **SECTION 11: Toxicological information**

### **11.1. Information on toxicological effects**

#### **Acute toxicity**

Based on available data, the classification criteria are not met.

Toxikologische Daten liegen keine vor.

#### **Irritation and corrosivity**

Based on available data, the classification criteria are not met.

#### **Sensitising effects**

Based on available data, the classification criteria are not met.

#### **STOT-single exposure**

Based on available data, the classification criteria are not met.

#### **Severe effects after repeated or prolonged exposure**

Based on available data, the classification criteria are not met.

#### **Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

#### **Aspiration hazard**

Based on available data, the classification criteria are not met.

#### **Additional information on tests**

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

#### **Practical experience**

#### **Other observations**

Contact with eyes may cause irritation.

Frequent persistent contact with the skin may cause skin irritation.

Ingestion causes irritation to the respiratory system and gastrointestinal disturbance.

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## **SECTION 12: Ecological information**

### **12.1. Toxicity**

Ecological data are not available.

### **12.2. Persistence and degradability**

Not readily biodegradable.

### **12.3. Bioaccumulative potential**

No data available.

### **12.4. Mobility in soil**

Slight mobility in soil.

### **12.5. Results of PBT and vPvB assessment**

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

### **12.6. Other adverse effects**

Hazardous water pollutant.

#### **Further information**

Do not flush into surface water or sanitary sewer system.

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## **SECTION 13: Disposal considerations**

### **13.1. Waste treatment methods**

#### **Advice on disposal**

Can be incinerated, when in compliance with local regulations.

#### **Waste disposal number of waste from residues/unused products**



130110 OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19); waste hydraulic oils; mineral based non-chlorinated hydraulic oils  
Classified as hazardous waste.

**Contaminated packaging**

Empty containers should be taken for local recycling, recovery or waste disposal.

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Packaging that cannot be cleaned should be disposed of like the product.

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**SECTION 14: Transport information**

**Land transport (ADR/RID); Marine transport (IMDG); Air transport (ICAO); Inland waterways transport (ADN)**

**14.1. UN number:**

No hazardous material as defined by the transport regulations.

**14.2. UN proper shipping name:**

No hazardous material as defined by the transport regulations.

**14.3. Transport hazard class(es):**

No hazardous material as defined by the transport regulations.

**14.4. Packing group:**

No hazardous material as defined by the transport regulations.

**14.5. Environmental hazards**

No hazardous material as defined by the transport regulations.

**14.6. Special precautions for user**

No hazardous material as defined by the transport regulations.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

No hazardous material as defined by the transport regulations.

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**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU regulatory information**

1999/13/EC (VOC): 0 %

**National regulatory information**

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

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**SECTION 16: Other information**

**Abbreviations and acronyms**

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route

RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses

ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure

IMDG = International Maritime Code for Dangerous Goods

IATA/ICAO = International Air Transport Association / International Civil Aviation Organization

MARPOL = International Convention for the Prevention of Pollution from Ships

IBC = Code International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

REACH = Registration, Evaluation, Authorization and Restriction of Chemicals

CAS = Chemical Abstract Service

EN = European norm

ISO = International Organization for Standardization

DIN = Deutsche Industrie Norm

PBT = Persistent Bioaccumulative and Toxic

LD = Lethal dose

LC = Lethal concentration

EC = Effect concentration

IC = Median immobilisation concentration or median inhibitory concentration

**Further Information**

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product



(in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*