

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

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Revision Number 2

EGHS / English

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Name Hydraulic Oil
Product Code(s) 20-3000, 20-3032
(M)SDS Number 1348161_E
Chemical name

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

Recommended Use Laboratory Use Only.
Uses advised against No information available.

1.3. Details of the supplier of the safety data sheet

Manufacturer ITW Test & Measurement GmbH
Manufacturer Address Boschstraße 10
73734 Esslingen am Neckar / GERMANY
www.buehler-met.de www.buehler.fr www.buehler.co.uk
Phone number +49 (0) 711 4904690-0
E-mail Address lab.eu@buehler.com

1.4. Emergency telephone number

Global Access Code: 334545
Americas: +1 760 476 3962 Europe: +1 760 476 3961
Middle East/Africa: +1 760 476 3959 Asia Pacific: +1 760 476 3960
UK: +44 8 08 189 0979

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

| | |
|-----------------|----------------------|
| Carcinogenicity | Category 1B - (H350) |
|-----------------|----------------------|

2.2. Label elements**Signal word****Danger****Hazard Statements**

H350 - May cause cancer

Precautionary Statements - EU (§28, 1272/2008)

P201 - Obtain special instructions before use

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P308 + P313 - IF exposed or concerned: Get medical advice/attention

2.3. Other hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

| Chemical name | EC No | CAS No | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | REACH registration number |
|-------------------------------------------------------|-----------|------------|----------|-----------------------------------------------------------------|---------------------------|
| Distillates, petroleum, hydrotreated heavy paraffinic | 265-157-1 | 64742-54-7 | 50 - 80% | Carc. 1B (H350) | |
| Residual oils (petroleum), solvent dewaxed | 265-166-0 | 64742-62-7 | 20 - 50% | Carc. 1B (H350) | |

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

| Chemical name | CAS No | SVHC candidates |
|-------------------------------------------------------|------------|-----------------|
| Distillates, petroleum, hydrotreated heavy paraffinic | 64742-54-7 | - |
| Residual oils (petroleum), solvent dewaxed | 64742-62-7 | - |

Section 4: FIRST AID MEASURES**4.1. Description of first aid measures**

| | |
|---------------------|----------------------------------------------------------------------------------------------------------------------|
| Inhalation | Remove to fresh air. |
| Skin contact | Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician. |
| Eye contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Ingestion | Clean mouth with water and drink afterwards plenty of water. |

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

Symptoms No information available.

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

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Other Information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Should not be released into the environment. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing.

General Hygiene Considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

8.2. Exposure controls

Personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand Protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state Oil

| | |
|-----------------------|--------------------------|
| Appearance | Amber |
| Odor | Oily |
| Color | No information available |
| Odor Threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks</u> | <u>Method</u> |
|----------------------------------------|--------------------|----------------|---------------|
| pH | No data available | | |
| Melting / freezing point | No data available | None known | |
| Boiling point / boiling range | > 288°C °C | | |
| Flash Point | 218°C C | | |
| Evaporation Rate | < 0.01 | None known | |
| Flammability (solid, gas) | No data available | None known | |
| Flammability Limit in Air | | None known | |
| Upper flammability limit | No data available | | |
| Lower flammability limit | No data available | | |
| Vapor pressure | No data available | None known | |
| Vapor density | No data available | None known | |
| Relative density | 0.9 | | |
| Water Solubility | Insoluble in water | | |
| Solubility(ies) | No data available | None known | |
| Partition coefficient: n-octanol/water | No data available | None known | |
| Autoignition temperature | No data available | None known | |
| Decomposition temperature | No data available | None known | |
| Kinematic viscosity | No data available | None known | |
| Viscosity | No data available | None known | |

9.2. Other information

| | |
|-----------------------------------|--------------------------|
| Softening Point | No information available |
| Molecular Weight | No information available |
| VOC Content (%) | No information available |
| Liquid Density | No information available |
| Bulk Density | No information available |
| Particle Size | No information available |
| Particle Size Distribution | No information available |

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

Explosion Data

| | |
|----------------------------------|-------|
| Sensitivity to Mechanical Impact | None. |
| Sensitivity to Static Discharge | None. |

10.3. Possibility of hazardous reactions

| | |
|-------------------------------------------|-------------------------------|
| Possibility of Hazardous Reactions | None under normal processing. |
|-------------------------------------------|-------------------------------|

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****Information on likely routes of exposure****Product Information**

| | |
|---------------------|-------------------------------------------------------------------|
| Inhalation | Specific test data for the substance or mixture is not available. |
| Eye contact | Specific test data for the substance or mixture is not available. |
| Skin contact | Specific test data for the substance or mixture is not available. |
| Ingestion | Specific test data for the substance or mixture is not available. |

Information on toxicological effects

Symptoms No information available.

Numerical measures of toxicity**Acute Toxicity****Unknown acute toxicity**

- 100 % of the mixture consists of ingredient(s) of unknown toxicity
- 100 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|-------------------------------------------------------|----------------------|-------------------------|-------------------------|
| Distillates, petroleum, hydrotreated heavy paraffinic | > 15 g/kg (Rat) | - | - |
| Residual oils (petroleum), solvent dewaxed | > 5000 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | = 2.18 mg/L (Rat) 4 h |

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name | EU - Annex VI Carcinogens |
|-------------------------------------------------------|---------------------------|
| Distillates, petroleum, hydrotreated heavy paraffinic | Carc. 1B |
| Residual oils (petroleum), solvent dewaxed | Carc. 1B |

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

| Chemical name | Toxicity to Algae | Toxicity to Fish | Toxicity to Microorganisms | Daphnia Magna (Water Flea) |
|-------------------------------------------------------|-------------------|------------------------------------------------|----------------------------|----------------------------|
| Distillates, petroleum, hydrotreated heavy paraffinic | - | 96h LC50: > 5000 mg/L (Oncorhynchus mykiss) | - | 48h EC50: > 1000 mg/L |
| Residual oils (petroleum), solvent dewaxed | - | 96h LC50: > 5000 mg/L (Oncorhynchus mykiss) | - | 48h EC50: > 1000 mg/L |

12.2. Persistence and degradability

Persistence and Degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

| Chemical name | PBT and vPvB assessment |
|---------------|-------------------------|
| | |

| | |
|-------------------------------------------------------|----------------|
| Distillates, petroleum, hydrotreated heavy paraffinic | Not applicable |
| Residual oils (petroleum), solvent dewaxed | Not applicable |

12.6. Other adverse effects

Other adverse effects No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging No information available.

Section 14: TRANSPORT INFORMATION

IMDG/IMO NOT REGULATED
14.1 UN-No. Not Regulated
14.2 Proper Shipping Name NOT REGULATED
14.3 Hazard Class NOT REGULATED
14.4 Packing Group NOT REGULATED
14.5 Marine Pollutant Not applicable
14.6 Special Provisions None
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

RID NOT REGULATED
14.1 UN-No. NOT REGULATED
14.2 Proper Shipping Name NOT REGULATED
14.3 Hazard Class NOT REGULATED
14.4 Packing Group NOT REGULATED
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

ADR NOT REGULATED
14.1 UN-No. NOT REGULATED
14.2 Proper Shipping Name NOT REGULATED
14.3 Hazard Class NOT REGULATED
14.4 Packing Group NOT REGULATED
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

IATA NOT REGULATED
14.1 UN-No. NOT REGULATED
14.2 Proper Shipping Name NON REGULATED
14.3 Hazard Class NOT REGULATED
14.4 Packing Group NOT REGULATED
14.5 Environmental hazard Not applicable

14.6 Special Provisions None

Section 14: TRANSPORT INFORMATION

IMDG/IMO NOT REGULATED
 14.1 UN-No. Not Regulated
 14.2 Proper Shipping Name NOT REGULATED
 14.3 Hazard Class NOT REGULATED
 14.4 Packing Group NOT REGULATED
 14.5 Marine Pollutant Not applicable
 14.6 Special Provisions None
 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

RID NOT REGULATED
 14.1 UN-No. NOT REGULATED
 14.2 Proper Shipping Name NOT REGULATED
 14.3 Hazard Class NOT REGULATED
 14.4 Packing Group NOT REGULATED
 14.5 Environmental hazard Not applicable
 14.6 Special Provisions None

ADR NOT REGULATED
 14.1 UN-No. NOT REGULATED
 14.2 Proper Shipping Name NOT REGULATED
 14.3 Hazard Class NOT REGULATED
 14.4 Packing Group NOT REGULATED
 14.5 Environmental hazard Not applicable
 14.6 Special Provisions None

IATA NOT REGULATED
 14.1 UN-No. NOT REGULATED
 14.2 Proper Shipping Name NON REGULATED
 14.3 Hazard Class NOT REGULATED
 14.4 Packing Group NOT REGULATED
 14.5 Environmental hazard Not applicable
 14.6 Special Provisions None

Section 15: REGULATORY INFORMATION

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

Water hazard class (WGK) Not Applicable

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Authorizations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

| Chemical name | Restricted substance per REACH Annex XVII | Substance subject to authorization per REACH Annex XIV |
|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------|
| Distillates, petroleum, hydrotreated heavy paraffinic - 64742-54-7 | Use restricted. See item 28. | |
| Residual oils (petroleum), solvent dewaxed - 64742-62-7 | Use restricted. See item 28. | |

Persistent Organic Pollutants

Not applicable.

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable.

International Inventories

| | |
|----------------------|---------------------------------------------------|
| TSCA | Contact supplier for inventory compliance status. |
| DSL/NDSL | Contact supplier for inventory compliance status. |
| EINECS/ELINCS | Contact supplier for inventory compliance status. |
| ENCS | Contact supplier for inventory compliance status. |
| IECSC | Contact supplier for inventory compliance status. |
| KECL | Contact supplier for inventory compliance status. |
| PICCS | Contact supplier for inventory compliance status. |
| AICS | Contact supplier for inventory compliance status. |

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

No information available.

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under sections 2 and 3

H350 - May cause cancer if swallowed

Legend

SVHC: Substances of Very High Concern for Authorization:

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|----------------|----------------------------------------------------|-----------|------------------------------------------------------|
| TWA Ceiling | TWA (time-weighted average) Maximum limit value | STEL - | STEL (Short Term Exposure Limit) Skin designation |
|----------------|----------------------------------------------------|-----------|------------------------------------------------------|

Key literature references and sources for data

www.ChemADVISOR.com/

Issuing Date 01-Mar-2017

Revision Date 13-Apr-2017

This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006.

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End of Safety Data Sheet