

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

1.1 Product identifier

hydraulic fluid
Article number: 21648

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

1.2.1 Relevant uses

Hydraulics oil

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company Ferdinand Bilstein GmbH + Co. KG
Wilhelmstr. 47
58256 Ennepetal / GERMANY
Phone +49 2333 911-0
Fax +49 2333 911-444
Homepage www.febi.com
E-mail info@febi.com

Address enquiries to

Technical information info@febi.com

Safety Data Sheet info@febi.com

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

No classification.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms none

Signal word none

Hazard statements none

Precautionary statements none

Special labelling EUH210 Safety data sheet available on request.

2.3 Other hazards

Physico-chemical hazards No particular hazards known.

Human health dangers If swallowed or in the event of vomiting, risk of product entering the lungs.
Frequent persistent contact with the skin can cause skin irritation.
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Environmental hazards Does not contain any PBT or vPvB substances.
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
20 - < 50	1-Decene, homopolymer, hydrogenated
	CAS: 68037-01-4, EINECS/ELINCS: 500-183-1, Reg-No.: 01-2119486452-34-XXXX
	GHS/CLP: Asp. Tox. 1: H304
1 - < 10	Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics
	CAS: 1335203-17-2, EINECS/ELINCS: 934-956-3, Reg-No.: 01-2119827000-58-XXXX
	GHS/CLP: Asp. Tox. 1: H304

Comment on component parts

For full text of H-statements: see SECTION 16.
Contains less than 3% w/w DMSO-extract (only for mineral oils)

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Change soaked clothing.

Inhalation

Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact

When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion

Seek medical advice immediately.
Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

If swallowed or in the event of vomiting, risk of product entering the lungs.
Forward this sheet to your doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam, dry powder, water spray jet, carbon dioxide

Extinguishing media that must not be used

Full water jet.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Sulphur oxides (SO_x).
Carbon monoxide (CO)

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Some risk of slipping due to spillage of product.
Forms slippery surfaces with water.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special measures necessary if used correctly.
The product is combustible.
Do not eat, drink or smoke when using this product.
Use barrier skin cream.
Wash hands before breaks and after work.
Cloths contaminated with product should not be kept in trouser pockets.
Take off contaminated clothing and wash before reuse.
Contaminated work clothing should not be allowed out of the workplace.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.

Keep container tightly closed.
Protect from heat/overheating and from sun.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (UK)

Substance
1-Decene, homopolymer, hydrogenated
CAS: 68037-01-4, EINECS/ELINCS: 500-183-1, Reg-No.: 01-2119486452-34-XXXX
Long-term exposure: 5 mg/m ³ , OSHA PEL
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics
CAS: 1335203-17-2, EINECS/ELINCS: 934-956-3, Reg-No.: 01-2119827000-58-XXXX
Long-term exposure: 5 mg/m ³
Short-term exposure (15-minute): 10 mg/m ³

Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)

not relevant

DNEL

Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 64742-46-7
There are no DNEL values established for the substance.
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
There are no DNEL values established for the substance.

PNEC

Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 64742-46-7
There are no PNEC values established for the substance.
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
There are no PNEC values established for the substance.

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	If there is a risk of splashing: Safety glasses. (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. > 0,4 mm: Nitrile rubber, >120 min (EN 374-1/-2/-3). > 0,4 mm: Neoprene, >480 min (EN 374-1/-2/-3).
Skin protection	light protective clothing
Other	Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier. Avoid contact with eyes and skin.
Respiratory protection	Breathing apparatus in the event of aerosol or mist formation. Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Form	liquid
Color	light brown
Odor	characteristic
Odour threshold	No information available.
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point or initial boiling point and boiling range [°C]	not applicable
Flash point [°C]	200 °C / 392 °F (DIN ISO 2592)
Flammability	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/cm³]	0,85 (DIN 51757) (15 °C / 59,0 °F)
Relative density	No information available.
Bulk density [kg/m³]	not applicable
Solubility in water	insoluble
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	not applicable
Kinematic viscosity	30,6 mm²/s, 40 °C / 104 °F
Relative vapour density	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature [°C]	not applicable
Decomposition temperature [°C]	No information available.
Particle characteristics	not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with oxidizing agents.

Reactions with acids.

Reactions with strong alkalies.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Oxidizing agent

Strong acids.

Strong basic compounds

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity

Product
oral, Based on the available information, the classification criteria are not fulfilled.
Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 64742-46-7
LD50, oral, Rat, >5000 mg/kg (OECD 401)
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
LD50, oral, Rat, > 5000 mg/kg bw
NOAEL, oral, Rat, 1000 - 6771 mg/kg bw/day

Acute dermal toxicity

Product
dermal, Based on the available information, the classification criteria are not fulfilled.
Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 64742-46-7
LD50, dermal, Rabbit, >3160 mg/kg (OECD 402)
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
LD50, dermal, Rat, >2000 mg/kg bw, OECD 402

Acute inhalational toxicity

Product
inhalative, Based on the available information, the classification criteria are not fulfilled.
Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 64742-46-7
LC50, inhalative, Rat, >5266 mg/m ³ (4h) (OECD 403)
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
LC50, inhalative, Rat, >5.2 mg/L air, OECD 403, no adverse effect observed

Serious eye damage/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
Eye, non-irritating

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
dermal, non-irritating

Respiratory or skin sensitisation Based on the available information, the classification criteria are not fulfilled.

Substance
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
dermal, non-sensitizing

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure Based on the available information, the classification criteria are not fulfilled.

Substance

Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 64742-46-7
NOAEL, oral, Rat, 5000 mg/kg bw/day

Mutagenicity Based on the available information, the classification criteria are not fulfilled.

Substance
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
in vitro, negativ
in vivo, negativ

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

- Fertility

Substance
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
NOAEL, oral, Rat, 1000 mg/kg bw/day, no adverse effect observed

- Development

Substance
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
NOAEL, oral, Rat, 1000 mg/kg bw/day, no adverse effect observed

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard Based on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2 Other information none

SECTION 12: Ecological information

Product

12.1 Toxicity

Based on the available information, the classification criteria are not fulfilled.

Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 64742-46-7
EL50, (72h), Skeletonema costatum, > 10000 mg/l (ISO 10253)
LL50, (96h), Scophthalmus maximus, > 1028 mg/l (OECD 203)
LL50, (48h), Acartia tonsa, > 3193 mg/l (ISO 14669)
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
EL50, (48h), Invertebrates, >1000mg/L
NOELR, (21d), Invertebrates, 125mg/L
NOELR, (72h), Algae, 1000 mg/L
LL50, (96h), Fish, >1000mg/L

12.2 Persistence and degradability

Behaviour in environment compartments No information available.

Behaviour in sewage plant No information available.

Biological degradability

Substance
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
EC50, (16h), Microorganisms, 10 g/L
EL50, (48h), Invertebrates, 1 g/L
EL50, (48h), Algae, 1 g/L
LL50, (96h), Fish, 1 g/L

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Ecological data of complete product are not available.

Do not discharge product unmonitored into the environment or into the drainage.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

In according to RoHS!
Coordinate disposal with the authorities if necessary.

Waste no. (recommended)

130111*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended)

150102
150104
150110* packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.4 Packing group

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EG (2000/532/EC); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707
- Comment on component parts	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
- Annex XIV (REACH)	According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances $\geq 0.1\%$ that are subject to authorisation.
- Annex XVII (REACH)	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances $\geq 0.1\%$ that are restricted. According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product is not subject to any restrictions.
TRANSPORT-REGULATIONS	ADR (2025); IMDG-Code (2025, 42. Amdt.); IATA-DGR (2025)
NATIONAL REGULATIONS (UK):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	not applicable
- VOC (2010/75/CE)	0%

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H304 May be fatal if swallowed and enters airways.

16.2 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
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform Chemical Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Modified position 2.3, 3.2