

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

1.1 Product identifier

febi 21647 hydraulic fluid
Article number: 21647
UFI: 3HXW-H12E-000T-2DJE

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
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1.4 Emergency telephone number

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

Company +49 2333 911-0

SECTION 2: Hazards identification

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

Acute Tox. 4: H332 Harmful if inhaled.
Asp. Tox. 1: H304 May be fatal if swallowed and enters airways.
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

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

Hazard pictograms



Signal word

DANGER

Contains:

1-Decene, Dimer, hydrogenated

Hazard statements

H332 Harmful if inhaled.
H304 May be fatal if swallowed and enters airways.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER / doctor.
P312 Call a POISON CENTER / doctor if you feel unwell.
P331 Do NOT induce vomiting.
P405 Store locked up.
P501 Dispose of contents / container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Special labelling

Contains: Methyl methacrylate. EUH208 May produce an allergic reaction.

2.3 Other hazards

Human health dangers	Frequent persistent contact with the skin can cause skin irritation. If swallowed or in the event of vomiting, risk of product entering the lungs.
Environmental hazards	Does not contain any PBT or vPvB substances.
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
50 - < 99	1-Decene, Dimer, hydrogenated
	CAS: 68649-11-6, EINECS/ELINCS: 500-228-5, Reg-No.: 01-2119493069-28-XXXX
	GHS/CLP: Acute Tox. 4: H332 - Asp. Tox. 1: H304
10 - < 20	Distillates (petroleum), hydrotreated light naphthenic
	CAS: 64742-53-6, EINECS/ELINCS: 265-156-6, EU-INDEX: 649-466-00-2, Reg-No.: 01-2119480375-34
	GHS/CLP: Asp. Tox. 1: H304
1 - < 5	Gas oils (petroleum), hydrodesulfurized
	CAS: 64742-79-6, EINECS/ELINCS: 265-182-8, EU-INDEX: 649-222-00-5, Reg-No.: 01-2119471311-49-XXXX
	GHS/CLP: Acute Tox. 4: H332 - Asp. Tox. 1: H304 - Skin Irrit. 2: H315 - Aquatic Chronic 2: H411
0,25 - < 1	2,6-di-tert-butyl-p-cresol
	CAS: 128-37-0, EINECS/ELINCS: 204-881-4, Reg-No.: 01-2119565113-46-XXXX
	GHS/CLP: Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M-Factor (acute): 1, M-Factor (chronic): 1
0,1 - < 1	Methyl methacrylate
	CAS: 80-62-6, EINECS/ELINCS: 201-297-1, EU-INDEX: 607-035-00-6, Reg-No.: 01-2119452498-28-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - STOT SE 3: H335 - Skin Irrit. 2: H315 - Skin Sens. 1: H317

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

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	In case of contact with skin wash off immediately 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	Do not induce vomiting. Rinse out mouth and give plenty of water to drink. Consult a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms of poisoning may not occur for many hours, therefore keep under medical supervision for at least 48 hours.

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.
Treat symptomatically.
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

Not combusted hydrocarbons.
Risk of formation of toxic pyrolysis products.
Carbon monoxide (CO)

5.3 Advice for firefighters

Do not inhale explosion and/or combustion gases.
Use self-contained breathing apparatus.
Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/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

Take up with absorbent material (e.g. general-purpose binder).
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

Avoid formation of aerosols.

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.
Contaminated work clothing should not be allowed out of the workplace.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

- Keep only in original container.
- Prevent penetration into the ground.
- Do not store together with food and animal food/diet.
- Keep container tightly closed.
- Keep container in a well-ventilated place.

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 (GB)

Substance
2,6-di-tert-butyl-p-cresol
CAS: 128-37-0, EINECS/ELINCS: 204-881-4, Reg-No.: 01-2119565113-46-XXXX
Long-term exposure: 10 mg/m ³

DNEL

Substance
Distillates (petroleum), hydrotreated light naphthenic, CAS: 64742-53-6
Industrial, inhalative, Long-term - local effects, 5,4 mg/m ³
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
Industrial, inhalative, Acute - systemic effects, 60 mg/m ³
general population, inhalative, Acute - systemic effects, 50 mg/m ³
Methyl methacrylate, CAS: 80-62-6
Industrial, dermal, Long-term - systemic effects, 13.67 mg/kg bw/d
Industrial, inhalative, Long-term - systemic effects, 208 mg/m ³
general population, dermal, Long-term - systemic effects, 8.2 mg/kg bw/d
general population, inhalative, Long-term - systemic effects, 74,3 mg/m ³
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
Industrial, dermal, Long-term - systemic effects, 500 µg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 1.76 mg/m ³
general population, oral, Long-term - systemic effects, 250 µg/kg bw/day
general population, dermal, Long-term - systemic effects, 250 µg/kg bw/day
general population, inhalative, Long-term - systemic effects, 435 µg/m ³

PNEC

Substance
Methyl methacrylate, CAS: 80-62-6
sediment (freshwater), 5.74 mg/kg
sewage treatment plants (STP), 10 mg/L
seawater, 0.94 mg/L
freshwater, 0.94 mg/L
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
oral (food), 16.67 mg/kg food
soil, 53.9 µg/kg soil dw
sediment (seawater), 45.82 µg/kg sediment dw
sediment (freshwater), 458.19 µg/kg sediment dw
sewage treatment plants (STP), 17 µg/L
seawater, 19.9 ng/L
freshwater, 199 ng/L

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. General exposure limit for oil mist should be noted.
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, >480 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, combination filter A-P1. (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
Color	green
Odor	characteristic
Odour threshold	not applicable
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	No information available.
Flash point [°C]	160 (ISO 2592)
Flammability (solid, gas) [°C]	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]	0,83 (DIN 51757) (15 °C / 59,0 °F)
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	immiscible
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	No information available.
Kinematic viscosity	18,5 mm ² /s (40° C)
Relative vapour density	No information available.
Evaporation speed	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature [°C]	No information available.
Particle characteristics	No information available.

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

The product is stable under standard conditions.

10.3 Possibility of hazardous reactions

Reactions with strong oxidizing agents.

Reactions with acids.

Reactions with strong alkalis.

10.4 Conditions to avoid

See SECTION 7.2.

Strong heating.

10.5 Incompatible materials

Oxidizing agent

Strong basic compounds

Strong acids.

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
Distillates (petroleum), hydrotreated light naphthenic, CAS: 64742-53-6
LD50, oral, Rat, > 5000 mg/kg bw
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
LD50, oral, Rat, > 5000 mg/l
Methyl methacrylate, CAS: 80-62-6
LD50, oral, Rat, > 5000 mg/kg OECD 401
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
LD50, oral, Rat, 2930 - 6000 mg/kg bw

Acute dermal toxicity

Product
dermal, Based on the available information, the classification criteria are not fulfilled.
Substance
Distillates (petroleum), hydrotreated light naphthenic, CAS: 64742-53-6
LD50, dermal, Rabbit, > 2000 mg/kg bw
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
LD50, dermal, Rabbit, > 3000 mg/l
Methyl methacrylate, CAS: 80-62-6
LD50, dermal, Rabbit, > 5000 mg/kg
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
LD10, dermal, Rat, 2000 mg/kg bw

Acute inhalational toxicity

Product
ATE-mix, inhalation (vapour), 241,23 mg/l
ATE-mix, inhalativ (mist), 1,72 mg/l
Substance
Distillates (petroleum), hydrotreated light naphthenic, CAS: 64742-53-6
LC50, inhalative, Rat, > 5,53 mg/l/4h (dust/mist)
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
LC50, inhalative, Rat, >1,81 mg/l 4h
Methyl methacrylate, CAS: 80-62-6
LC50, inhalative, Rat, 29,8 mg/l

Serious eye damage/irritation	Based on the available information, the classification criteria are not fulfilled.
Skin corrosion/irritation	Based on the available information, the classification criteria are not fulfilled.
Respiratory or skin sensitisation	Based on the available information, the classification criteria are not fulfilled. May produce an allergic reaction. Calculation method

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
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
NOAEC, oral, Rat, 25 - 70 mg/kg bw/day

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

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

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

Aspiration hazard Based on the available information, the classification criteria are fulfilled.
 On basis of test data

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

Endocrine disrupting properties No information available.

Other information none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Distillates (petroleum), hydrotreated light naphthenic, CAS: 64742-53-6
LC50, (96h), fish, > 100 mg/l
IC50, (48h), Algae, > 100 mg/l
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
EC50, (48h), Daphnia magna, > 1000 mg/l
EL50, (72h), Algae, >1000 mg/l
NOELR, (21d), Daphnia magna, 125 mg/l
LL50, (96h), Oncorhynchus mykiss, >1000 mg/l
Methyl methacrylate, CAS: 80-62-6
LC50, (96h), Oncorhynchus mykiss, > 79 mg/l OECD 203
EC50, (72h), Selenastrum capricornutum, > 110 mg/l OECD 201
EC50, (48h), Daphnia magna, 69 mg/l OECD 202
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
LC50, (96h), fish, 199 - 570 µg/L
EC50, (4d), Algae, 758 µg/L
EC50, (48h), Invertebrates, 480 - 610 µg/L
NOEC, (21d), Invertebrates, 23 - 316 µg/L
NOEC, (45d), fish, 53 µg/L

12.2 Persistence and degradability

Behaviour in environment compartments not determined

Behaviour in sewage plant not determined

Biological degradability not determined

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

No information available.

12.7 Other adverse effects

Ecological data of complete product are not available.

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

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 disposal contractor/authorities if necessary.
Dispose of as hazardous waste.

Waste no. (recommended)

130206*
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)

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

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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.
not applicable

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/EC 2000/532/EC; 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2022)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (2010/75/CE)	0 %

15.2 Chemical safety assessment

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

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H225 Highly flammable liquid and vapour.
H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
H315 Causes skin irritation.
H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.

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

Acute Tox. 4: H332 Harmful if inhaled. (Calculation method)
Asp. Tox. 1: H304 May be fatal if swallowed and enters airways. (On basis of test data)
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects. (Calculation method)

Modified position

none