

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

### 1.1 Product identifier

**febi 21647 hydraulic fluid**  
**Article number: 21647**

### 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](http://www.febi.com)  
E-mail [info@febi.com](mailto:info@febi.com)

#### Address enquiries to

**Technical information** [info@febi.com](mailto:info@febi.com)

**Safety Data Sheet** [info@febi.com](mailto:info@febi.com)

### 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 (EC) No 1272/2008]

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 (EC) No 1272/2008 (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.

## 2.3 Other hazards

<b>Human health dangers</b>	Frequent persistent contact with the skin can cause skin irritation. If swallowed or in the event of vomiting, risk of product entering the lungs.
<b>Environmental hazards</b>	Does not contain any PBT or vPvB substances.
<b>Other hazards</b>	Further hazards were not determined with the current level of knowledge.

## SECTION 3: Composition / Information on ingredients

### Product-type:

3.2 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_acute = 1

**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

<b>General information</b>	Change soaked clothing.
<b>Inhalation</b>	Ensure supply of fresh air. In the event of symptoms seek medical treatment.
<b>Skin contact</b>	In case of contact with skin wash off immediately with soap and water. Consult a doctor if skin irritation persists.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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 the 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 with 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 with 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



Ferdinand Bilstein GmbH + Co. KG

Date printed 24.10.2019, Revision 24.10.2019

Version 09. Supersedes version: 08

Page 4 / 11

**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 <sup>3</sup>

**DNEL**

Substance
Distillates (petroleum), hydrotreated light naphthenic, CAS: 64742-53-6
Industrial, inhalative, Long-term - local effects: 5,4 mg/m <sup>3</sup> .
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
Industrial, inhalative, Acute - systemic effects: 60 mg/m <sup>3</sup> .
general population, inhalative, Acute - systemic effects: 50 mg/m <sup>3</sup> .
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
Industrial, dermal, Long-term - systemic effects: 0.5 mg/kg bw/day.
Industrial, inhalative, Long-term - systemic effects: 3.5 mg/m <sup>3</sup> .
general population, oral, Long-term - systemic effects: 0.25 mg/kg bw/day.
general population, dermal, Long-term - systemic effects: 0.25 mg/kg bw/day.
general population, inhalative, Long-term - systemic effects: 0.86 mg/m <sup>3</sup> .

**PNEC**

Substance
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
oral (food), 8.33 mg/kg food.
soil, 47.69 µg/kg soil dw.
sediment (seawater), 9.96 µg/kg sediment dw.
sediment (freshwater), 99.6 µg/kg sediment dw.
sewage treatment plants (STP), 0.17 mg/l.
seawater, 0.02 µg/l.
freshwater, 0.199 µg/l.

## 8.2 Exposure controls

<b>Additional advice on system design</b>	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.
<b>Eye protection</b>	If there is a risk of splashing: safety glasses (EN 166:2001)
<b>Hand protection</b>	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).
<b>Skin protection</b>	light protective clothing
<b>Other</b>	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.
<b>Respiratory protection</b>	Breathing apparatus in the event of aerosol or mist formation. Short term: filter apparatus, combination filter A-P1. (DIN EN 14387)
<b>Thermal hazards</b>	none
<b>Delimitation and monitoring of the environmental exposition</b>	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

<b>Form</b>	liquid
<b>Color</b>	green
<b>Odor</b>	characteristic
<b>Odour threshold</b>	not applicable
<b>pH-value</b>	not applicable
<b>pH-value [1%]</b>	not applicable
<b>Boiling point [°C]</b>	No information available.
<b>Flash point [°C]</b>	160 (ISO 2592)
<b>Flammability (solid, gas) [°C]</b>	No information available.
<b>Lower explosion limit</b>	No information available.
<b>Upper explosion limit</b>	No information available.
<b>Oxidising properties</b>	no
<b>Vapour pressure/gas pressure [kPa]</b>	No information available.
<b>Density [g/ml]</b>	0,83 (DIN 51757) (15 °C / 59,0 °F)
<b>Bulk density [kg/m<sup>3</sup>]</b>	not applicable
<b>Solubility in water</b>	immiscible
<b>Partition coefficient [n-octanol/water]</b>	No information available.
<b>Viscosity</b>	18,5 mm <sup>2</sup> /s (40° C)
<b>Relative vapour density determined in air</b>	No information available.
<b>Evaporation speed</b>	No information available.
<b>Melting point [°C]</b>	No information available.
<b>Autoignition temperature [°C]</b>	No information available.
<b>Decomposition temperature [°C]</b>	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 alkalies.

### 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 toxicological effects**

**Acute toxicity**

Product
oral, Based on the available information, the classification criteria are not fulfilled.:
dermal, Based on the available information, the classification criteria are not fulfilled.:
ATE-mix, inhalation (vapour ), 241,23 mg/l.
ATE-mix, inhalativ (mist), 3,07 mg/l.
Substance
Distillates (petroleum), hydrotreated light naphthenic, CAS: 64742-53-6
LD50, dermal, Rabbit: > 2000 mg/kg bw.
LD50, oral, Rat: > 5000 mg/kg bw.
LC50, inhalative, Rat: > 5,53 mg/l/4h (dust/mist).
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
LD50, dermal, Rabbit: > 3000 mg/l.
LD50, oral, Rat: > 5000 mg/l.
LC50, inhalative, Rat: >1,81 mg/l 4h.
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
LD50, dermal, Rat: > 2000 mg/kg bw (OECD 402).
LD50, oral, Rat: > 6000 mg/kg bw (OECD 401).

<b>Serious eye damage/irritation</b>	Based on the available information, the classification criteria are not fulfilled.
<b>Skin corrosion/irritation</b>	Based on the available information, the classification criteria are not fulfilled.
<b>Respiratory or skin sensitisation</b>	Based on the available information, the classification criteria are not fulfilled.
<b>Specific target organ toxicity — single exposure</b>	Based on the available information, the classification criteria are not fulfilled.
<b>Specific target organ toxicity — repeated exposure</b>	Based on the available information, the classification criteria are not fulfilled.
<b>Mutagenicity</b>	Based on the available information, the classification criteria are not fulfilled.
<b>Reproduction toxicity</b>	Based on the available information, the classification criteria are not fulfilled.
<b>Carcinogenicity</b>	Based on the available information, the classification criteria are not fulfilled.
<b>Aspiration hazard</b>	Based on the available information, the classification criteria are fulfilled. On basis of test data
<b>General remarks</b>	

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.

## 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.
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
EC50, (72h), Desmodesmus subspicatus: > 0.4 mg/l (EU Method C.3).
EC50, (21d), Daphnia magna: > 0.39 mg/l (OECD 202).
EC50, (48h), Daphnia magna: 0.48 mg/l (OECD 202).
LC0, (96h), Danio rerio: >= 0.57 mg/l (EU Method C.1).
NOEC, (35d), Oryzias latipes: 0.053 mg/l (OECD 210).

### 12.2 Persistence and degradability

<b>Behaviour in environment compartments</b>	not determined
<b>Behaviour in sewage plant</b>	not determined
<b>Biological degradability</b>	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 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 c 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\*

### SECTION 14: Transport information

#### 14.1 UN 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

**Ferdinand Bilstein GmbH + Co. KG**

Date printed 24.10.2019, Revision 24.10.2019

Version 09. Supersedes version: 08

Page 10 / 11

**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**

not applicable

Relevant information under SECTION 6 to 8.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

not applicable

**SECTION 15: Regulatory information**

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

**EEC-REGULATIONS** 1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2016/2037/EC); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014

**TRANSPORT-REGULATIONS** ADR (2019); IMDG-Code (2019, 39. Amdt.); IATA-DGR (2019)

**NATIONAL REGULATIONS (GB):** EH40/2005 Workplace exposure limits (Second edition, published December 2011).

- **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**

not applicable

**SECTION 16: Other information**

**16.1 Hazard statements (SECTION 03)**

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  
ELINCS = European List of Notified Chemical Substances  
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  
LC50 = Lethal concentration, 50%  
LD50 = Median lethal dose  
LC0 = lethal concentration, 0%  
LOAEL = lowest-observed-adverse-effect level  
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

