

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

### 1.1 Product identifier

**febi 46161 hydraulic fluid**  
**Article number: 46161**  
**UFI: H4U3-X47W-A00C-SXGY**

### 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]

Asp. Tox. 1: H304 May be fatal if swallowed and enters airways.

### 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:** Base oil

**Hazard statements** H304 May be fatal if swallowed and enters airways.

**Precautionary statements** P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER / doctor.  
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.

**Ferdinand Bilstein GmbH + Co. KG**

Date printed 25.01.2021, Revision 25.01.2021

Version 06. Supersedes version: 05

Page 2 / 11

**2.3 Other hazards**

<b>Physico-chemical hazards</b>	No particular hazards known.
<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>	No particular hazards known.

**SECTION 3: Composition / Information on ingredients**

**3.1 Substances**

not applicable

**3.2 Mixtures**

The product is a mixture.

Range [%]	Substance
20 - < 50	Base oil CAS: 72623-86-0, EINECS/ELINCS: 276-737-9, Reg-No.: 01-2119474878-16-XXXX GHS/CLP: Asp. Tox. 1: H304
10 - < 20	1-Decene, Dimer, hydrogenated CAS: 68649-11-6, EINECS/ELINCS: 500-228-5 GHS/CLP: Asp. Tox. 1: H304 - Acute Tox. 4: H332
0,1 - < 0,25	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol CAS: 1218787-32-6, EINECS/ELINCS: 620-540-6, Reg-No.: 01-2119510877-33-XXXX GHS/CLP: Acute Tox. 4: H302 - Skin Corr. 1C: H314 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M-Factor (acute): 10

**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>	When in contact with the skin, clean 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. Seek medical advice immediately.

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

No information available.

**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

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.  
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.  
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)**

not applicable

**DNEL**

Substance
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol, CAS: 1218787-32-6
Industrial, dermal, Long-term - systemic effects, 0.3 mg/kg bw/day,
Industrial, inhalative, Long-term - systemic effects, 2.112 mg/m <sup>3</sup> ,
general population, oral, Long-term - systemic effects, 0.214 mg/kg bw/day,
general population, dermal, Long-term - systemic effects, 0.214 mg/kg bw/day,
general population, inhalative, Long-term - systemic effects, 0.745 mg/m <sup>3</sup> ,

**PNEC**

Substance
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol, CAS: 1218787-32-6
oral (food), 2 mg/kg food,
soil, 5 mg/kg soil dw,
sediment (seawater), 0.169 mg/kg sediment dw,
sediment (freshwater), 1.692 mg/kg sediment dw,
sewage treatment plants (STP), 1500 µg/L,
seawater, 0.021 µg/L,
freshwater, 0.214 µg/L,

**8.2 Exposure controls**

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation. General exposure limit for oil mist should be noted. 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.
<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: Neoprene, >480 min (EN 374-1/-2/-3). > 0,4 mm: Nitrile rubber, >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

Physical state	liquid
Color	green
Odor	characteristic
Odour threshold	No information available.
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	No information available.
Flash point [°C]	145
Flammability (solid, gas) [°C]	No information available.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/ml]	0,85 (15 °C / 59,0 °F)
Bulk density [kg/m <sup>3</sup> ]	not applicable
Solubility in water	immiscible
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	No information available.
Kinematic viscosity	18,9 mm <sup>2</sup> /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 acids, alkalis and oxidizing agents.

### 10.4 Conditions to avoid

No special measures necessary.

### 10.5 Incompatible materials

Acids  
Oxidizing agent  
Strong basic compounds

## **10.6 Hazardous decomposition products**

No hazardous decomposition products known.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute oral toxicity** not determined

Product
oral, Based on the available information, the classification criteria are not fulfilled.,
Substance
Base oil, CAS: 72623-86-0
LD50, oral, Rat, > 2001 mg/kg,
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol, CAS: 1218787-32-6
LD50, oral, Rat, 1500 mg/kg bw (OECD 425),

**Acute dermal toxicity** not determined

Product
dermal, Based on the available information, the classification criteria are not fulfilled.,
Substance
Base oil, CAS: 72623-86-0
LD50, dermal, Rabbit, > 2001 mg/kg,

**Acute inhalational toxicity** not determined

Product
ATE-mix, inhalation (vapour ), 289,47 mg/l,
Substance
Base oil, CAS: 72623-86-0
LC50, inhalative, Rat, > 5,53 mg/l/4h,

**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** Toxicological data of complete product are not available.  
 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.

**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.  
 May be fatal if swallowed and enters airways.  
 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. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

## SECTION 12: Ecological information

### 12.1 Toxicity

Substance
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol, CAS: 1218787-32-6
LC50, (24h), Danio rerio, >0.29 mg/L (OECD 203),
EC50, (24h), Daphnia magna, 0.21 mg/L (OECD 202),
EC10, (72h), Daphnia magna, 34.1 µg/L (OECD 201),
EC10, (21d), Daphnia magna, 10.7 µg/L (OECD 211),

### 12.2 Persistence and degradability

**Behaviour in environment compartments** not determined

**Behaviour in sewage plant** not determined

**Biological degradability** The product is slightly soluble in water. It can be largely eliminated from the water by abiotic processes, e.g. mechanical separation.

### 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

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.  
Do not discharge product unmonitored into the environment.



### 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

Coordinate disposal with the authorities if necessary.  
Dispose of as hazardous waste.  
In according to RoHS!

##### Waste no. (recommended)

130205\* mineral-based non-chlorinated engine, gear and lubricating oils

##### 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

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 25.01.2021, Revision 25.01.2021

Version 06. Supersedes version: 05 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**

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** 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 (2019); IMDG-Code (2019, 39. Amdt.); IATA-DGR (2020)

**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 3)**

H410 Very toxic to aquatic life with long lasting effects.  
H400 Very toxic to aquatic life.  
H314 Causes severe skin burns and eye damage.  
H302 Harmful if swallowed.  
H332 Harmful if inhaled.  
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

Asp. Tox. 1: H304 May be fatal if swallowed and enters airways. (On basis of test data)

### Modified position

SECTION 3 been added: 2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol

SECTION 3 been added: 1-Decene, Dimer, hydrogenated

SECTION 2 deleted: P273 Avoid release to the environment.

SECTION 2 deleted: H412 Harmful to aquatic life with long lasting effects.

SECTION 2 deleted: Aquatic Chronic 3

SECTION 16 deleted: Calculation method