

## SECTION 1: Identification of the substance / preparation and of the company

### 1.1 Product identifier

**febi 06161 hydraulic fluid**  
**Article number 06161, 86161, 88955**

### 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 phone

**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

#### 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

see SECTION 16

#### 2.1.2 Classification according to Regulation 67/548/EEC or 1999/45/EC

Xn, Harmful - R 20: Harmful by inhalation.  
R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 2.2 Label elements

The product is classified and required to be labelled in accordance with EC-Directives

#### Labelling according to Regulation 67/548/EEC or 1999/45/EC

##### Hazard symbols



Harmful

##### Contains:

I-Decane, dimmer hydrogenated

##### R-phrases

R 20: Harmful by inhalation.  
R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

##### S-phrases

S 2: Keep out of the reach of children.  
S 23.3: Do not breathe vapour.  
S 61: Avoid release to the environment. Refer to special instructions, safety data sheets.  
S 62: If swallowed, do not induce vomiting. Seek medical advice immediately and show this container or label.

## 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:

The product is a mixture.

Range [%]	Substance
50 - < 99	I-Decane, dimmer hydrogenated CAS: 68649-11-6, EINECS/ELINCS: 500-228-5, ECB-Nr.: 01-2119493069-28-XXXX GHS/CLP: Acute Tox. 4: H332 - Asp. Tox. 1: H304 EEC: Xn, R 20-65
2,4 - < 5	Gas oils (petroleum), hydrodesulfurized CAS: 64742-79-6, EINECS/ELINCS: 265-182-8, EU-INDEX: 649-222-00-5 GHS/CLP: Acute Tox. 4: H332 - Asp. Tox. 1: H304 - Skin Irrit. 2: H315 - Aquatic Chronic 2: H411 EEC: Xn-N, R 20-65-38-51/53
0,1 - <1	Phosphate ester derivative (Germany:72243/00/2010.0061) GHS/CLP: Aquatic Chronic 2: H411 - Eye Irrit. 2: H319 - Skin Irrit. 2: H315 EEC: Xi-N, R 36/38-51/53
0,1 - <1	2,6-di-tert-butyl-p-cresol CAS: 128-37-0, EINECS/ELINCS: 204-881-4, ECB-Nr.: 01-2119565113-46-XXXX GHS/CLP: Aquatic Chronic 1: H410, M = 1 EEC: N, R 50/53

**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 and R-phrases: 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 for 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. Supply with medical care.

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

Headache

### 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

<b>Suitable extinguishing media</b>	Foam, dry powder, water spray jet, carbon dioxide.
<b>Extinguishing media that must not be used</b>	Full water jet.

## 5.2 Special hazards arising from the substance or mixture

Not combusted hydrocarbons.  
Unknown 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, smoke or take drugs at work.  
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.  
Do not store together with oxidizing agents.  
Keep container tightly closed.  
Keep container in a well-ventilated place.  
Protect from heat/overheating.

### 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**

Range [%]	Substance
0,1 - <1	2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
	Industrial, inhalative, Long-term - systemic effects: 5,8 mg/m <sup>3</sup> .
	Industrial, dermal, Long-term - systemic effects: 8,3 mg/kg.

**PNEC**

Range [%]	Substance
0,1 - <1	2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
	soil, 1,04 mg/kg.
	sewage treatment plants (STP), 100 mg/l.
	sediment (fresh water), 1,29 mg/kg.
	marine water, 0,0004 mg/l.
	fresh water, 0,004 mg/l.

**8.2 Exposure controls**

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation.
<b>Eye protection</b>	If there is a risk of splashing: Safety glasses.
<b>Hand protection</b>	The details concerned are recommendations. Please contact the glove supplier for further information. Nitrile rubber, >480 min (EN 374). Neoprene, >480 min (EN 374).
<b>Skin protection</b>	Light protective clothing.
<b>Other</b>	Avoid contact with eyes and skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of these equipments to chemicals should be ascertained with the respective supplier.
<b>Respiratory protection</b>	Breathing apparatus in the event of aerosol or mist formation. Short term: filter apparatus, combination filter A-P1.
<b>Thermal hazards</b>	none
<b>Delimitation and monitoring of the environmental exposition</b>	See SECTION 6+7.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form	liquid
Color	green
Odor	characteristic
Odour threshold	not applicable
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not determined
Flash point [°C]	160
Flammability [°C]	not determined
Lower explosion limit	not determined
Upper explosion limit	not determined
Oxidizing properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/ml]	0,83 (DIN 51 757) (15 °C / 59,0 °F)
Bulk density [kg/m <sup>3</sup> ]	not applicable
Solubility in water	immiscible
Partition coefficient [n-octanol/water]	not determined
Viscosity	18 mm <sup>2</sup> /s (40°C)
Relative vapour density determined in air	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Autoignition temperature [°C]	not determined
Decomposition temperature [°C]	not determined

### 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.

### 10.4 Conditions to avoid

See SECTION 7.2.  
Strong heating.

### 10.5 Incompatible materials

No information available.

### 10.6 Hazardous decomposition products

No hazardous decomposition products known.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Range [%]	Substance
0,1 - <1	Phosphate ester derivative (Germany:72243/00/2010.0061)
	LD50, dermal, Rat: > 2000 mg/l.
	LD50, oral, Rat: > 2000 mg/l.
50 - < 99	I-Decane, dimmer hydrogenated, CAS: 68649-11-6
	LD50, dermal, Rabbit: > 3000 mg/l.
	LD50, oral, Rat: > 5000 mg/l.
	LC50, inhalative, Rat: <2,09 mg/l 4h.
0,1 - <1	2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
	LD50, dermal, Rabbit: > 2000 mg/kg (Lit.).
	LD50, oral, Rat: 2930 mg/kg (Lit.).

<b>Serious eye damage/irritation</b>	not determined
<b>Skin corrosion/irritation</b>	not determined
<b>Respiratory or skin sensitisation</b>	not determined
<b>Specific target organ toxicity — single exposure</b>	not determined
<b>Specific target organ toxicity — repeated exposure</b>	not determined
<b>Mutagenicity</b>	not determined
<b>Reproduction toxicity</b>	not determined
<b>Carcinogenicity</b>	not determined
<b>General remarks</b>	

The product was classified on the basis of the calculation procedure of the preparation directive.  
 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

Range [%]	Substance
0,1 - <1	Phosphate ester derivative (Germany:72243/00/2010.0061)
	LC50, (96h), fish: 5,5 mg/l.
	EC50, (48h), Daphnia magna: 1,2 mg/l.
50 - < 99	I-Decane, dimmer hydrogenated, CAS: 68649-11-6
	LC50, (96h), fish: > 1000 mg/l.
	EC50, Algae: > 1000 mg/l.
	EC50, (48h), Daphnia magna: > 1000 mg/l.
0,1 - <1	2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
	LC50, (96h), Brachidanio rerio: > 0,42 mg/l (Lit.).
	LC50, (48h), Daphnia magna: > 0,57 mg/l (Lit.).
	EC50, (72h), Scenedesmus subspicatus: > 0,42 mg/l (Lit.).

### 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



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**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 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\*

**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\*

**SECTION 14: Transport information**

**14.1 UN number**

See SECTION 14.2 in accordance with UN shipping name

**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)**

See SECTION 14.2 in accordance with UN shipping name

**14.4 Packing group**

See SECTION 14.2 in accordance with UN shipping name

#### 14.5 Environmental hazards

See SECTION 14.2 in accordance with UN shipping name

#### 14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

#### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not applicable

### SECTION 15: Regulatory information

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

<b>EEC-REGULATIONS</b>	1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC
<b>TRANSPORT-REGULATIONS</b>	DOT-Classification, ADR (2013); IMDG-Code (2013, 36. Amdt.); IATA-DGR (2013).
<b>NATIONAL REGULATIONS (GB):</b>	EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4
<b>- Observe employment restrictions for people</b>	Observe employment restrictions for women of child-bearing age, for mothers-to-be and nursing mothers and for young people.
<b>- VOC (1999/13/CE)</b>	0%

#### 15.2 Chemical safety assessment

not applicable

### SECTION 16: Other information

#### 16.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms



Signal word

DANGER

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.

Classification procedure

Classification according to conversion table Annex VII 1272/2008/EC

#### 16.2 R-phrases (SECTION 3)

R 20: Harmful by inhalation.  
R 65: Harmful - may cause lung damage if swallowed.  
R 38: Irritating to skin.  
R 51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R 36/38: Irritating to eyes and skin.

#### 16.3 Hazard statements (SECTION 3)

H319 Causes serious eye irritation.  
H410 Very toxic to aquatic life with long lasting effects.  
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.





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**16.4 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  
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  
MARPOL = International Convention for the Prevention of Marine Pollution from Ships  
PBT = Persistent, Bioaccumulative and Toxic substance  
PNEC = Predicted No-Effect Concentration  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals  
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

**16.5 Other information**

**Modified position**

SECTION 2 been added: S 23.3: Do not breathe vapour.  
SECTION 2 been added: The product is classified and required to be labelled in accordance with EC-Directives  
SECTION 4 been added: Forward this sheet to the doctor.  
SECTION 4 been added: Treat symptomatically.  
SECTION 4 been added: If eye irritation persists: Get medical advice/attention.  
SECTION 4 been added: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
SECTION 7 been added: Take off contaminated clothing and wash before reuse.  
SECTION 7 been added: Contaminated work clothing should not be allowed out of the workplace.  
SECTION 16 been added: Observe employment restrictions for women of child-bearing age, for mothers-to-be and nursing mothers and for young people.