

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

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

Lubricant

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

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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

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.
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

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	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
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

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

General information	Change soaked clothing.
Inhalation	Ensure supply of fresh air. In the event of symptoms seek for 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	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

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
If swallowed or in the event of vomiting, risk of product entering the lungs.
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.
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.
- 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.
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)

Range [%]	Substance
0,1 - 1	2,6-di-tert-butyl-p-cresol
	CAS: 128-37-0, EINECS/ELINCS: 204-881-4
	Long-term exposure: 10 mg/m ³

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 ³ .
	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

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	If there is a risk of splashing: Safety glasses.
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. Nitrile rubber, >480 min (EN 374). Neoprene, >480 min (EN 374).
Skin protection	Light protective clothing.
Other	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. Avoid contact with eyes and skin.
Respiratory protection	Breathing apparatus in the event of high concentrations. Short term: filter apparatus, combination filter A-P1.
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	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 (ISO 2592)
Flammability [°C]	not determined
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidizing properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/ml]	0,831 (DIN 51757) (15 °C / 59,0 °F)
Bulk density [kg/m ³]	not applicable
Solubility in water	immiscible
Partition coefficient [n-octanol/water]	not determined
Viscosity	18,5 mm ² /s (40°C); (DIN 51562)
Relative vapour density determined in air	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Autoignition temperature [°C]	not applicable
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.
Reactions with acids.
Reactions with strong alkalies.

10.4 Conditions to avoid

See SECTION 7.2.

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.).

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

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

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	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 product was classified on the basis of the calculation procedure of the preparation directive.

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

Disposal in an incineration plant in accordance with the regulations of the local authorities.
In according to RoHS!
Coordinate disposal with the authorities if necessary.

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)

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

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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

EEC-REGULATIONS	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
TRANSPORT-REGULATIONS	DOT-Classification, ADR (2013); IMDG-Code (2013, 36. Amdt.); IATA-DGR (2013).
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4
- Observe employment restrictions for people	Observe employment restrictions for women of child-bearing age, for mothers-to-be and nursing mothers and for young people.
- VOC (1999/13/CE)	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 36/38: Irritating to eyes and skin.
R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

16.3 Hazard statements (SECTION 3)

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

16.4 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 4 been added: Forward this sheet to the doctor.
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 8 been added: If there is a risk of splashing:
SECTION 10 been added: Reactions with strong alkalis.
SECTION 10 been added: Reactions with acids.
SECTION 13 been added: