

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

1.1 Product identifier

febi 40580 Gear oil 75W - 80
Article number 40580

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant uses

Gearbox 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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Address enquiries to

Technical information info@febi.com
Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency phone

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

not determined

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

No classification.

2.2 Label elements

Although this product does not require a hazard warning label, we recommend that the safety advice should be observed.

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

Hazard symbols none

R-phrases none

S-phrases S 2: Keep out of the reach of children.
S 24: Avoid contact with skin.
S 46: If swallowed, seek medical advice immediately and show this container or label.

Special labelling Safety data sheet available for professional user on request.

Contains: Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched), Polysulfides, di-tert-Bu. May produce an allergic reaction.

2.3 Other hazards

Human health dangers May produce an allergic reaction.

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards No particular hazards known.

SECTION 3: Composition / Information on ingredients

Product-type:

The product is a mixture.

Range [%]	Substance
1 - 5	Polysulfides, di-tert-Bu
	CAS: 68937-96-2, EINECS/ELINCS: 273-103-3
	GHS/CLP: Skin Sens. 1: H317 - Aquatic Chronic 4: H413
	EEC: Xi, R 43-53
1 - 2,4	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)
	EINECS/ELINCS: 931-384-6, ECB-Nr.: 01-2119493620-38-XXXX
	GHS/CLP: Acute Tox. 4: H302 - Eye Dam. 1: H318 - Skin Sens. 1: H317 - Aquatic Chronic 2: H411 - Flam. Liq. 3: H226
	EEC: Xn-N, R 22-41-43-51/53

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	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. Consult a doctor immediately. Rinse out mouth and give plenty of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Headache
Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed

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

Unknown risk of formation of toxic pyrolysis products.
Carbon monoxide (CO)
Sulphur oxides (SOx).
Nitrogen oxides (NOx).

5.3 Advice for firefighters

Do not inhale explosion and/or combustion gases.
Use self-contained breathing apparatus.
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

Some risk of slipping due to 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. oil 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

No special measures necessary if used correctly.
Use only in well-ventilated areas.
Use solvent-resistant equipment.

Do not eat, drink or smoke when using this product.
After worktime and before work breaks the affected skin areas must be thoroughly cleaned.
Use barrier skin cream.
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 oxidizing agents.
Keep container in a well-ventilated place.
Keep container tightly closed.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

Ingredients with occupational exposure limits to be monitored (GB)

8.1 Control parameters

not applicable

DNEL

Range [%]	Substance
1 - 2,4	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)
	Industrial, inhalative, Long-term - systemic effects: 8,56 mg/m ³ /8h (ECHA CHEM).
	Industrial, dermal, Long-term - systemic effects: 12,5 mg/kg/8h (ECHA CHEM).

PNEC

Range [%]	Substance
1 - 2,4	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)
	sewage treatment plants (STP), 24.33 mg/l (ECHA CHEM).
	soil, 2,54 mg/kg soil dw (ECHA CHEM).
	sediment (marine water), 0,313 mg/kg (ECHA CHEM).
	sediment (fresh water), 3,13 mg/kg (ECHA CHEM).
	marine water, 0,00012 mg/l (ECHA CHEM).
	fresh water, 0,0012 mg/l (ECHA CHEM).

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	Safety glasses.
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. Nitrile rubber, >120 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. Do not inhale gases/vapours/aerosols. Avoid contact with eyes and skin.
Respiratory protection	not applicable
Thermal hazards	No information available.
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	yellowish
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not applicable
Flash point [°C]	190 (EN ISO 2592)
Flammability [°C]	Not explosive.
Lower explosion limit	not self-igniting
Upper explosion limit	not applicable
Oxidizing properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/ml]	0,882 (DIN 51757) (20 °C / 68,0 °F)
Bulk density [kg/m ³]	not applicable
Solubility in water	immiscible
Partition coefficient [n-octanol/water]	not determined
Viscosity	49,8 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

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with strong oxidizing agents.
Reactions with strong alkalies.
Reactions with strong acids.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Strong oxidizing agent.
See SECTION 10.3.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Range [%]	Substance
1 - 2,4	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)
	LD50, oral, Rat: 2000 mg/kg bw OECD 401 (ECHA CHEM).

Serious eye damage/irritation	not determined
Skin corrosion/irritation	not determined
Respiratory or skin sensitisation	May produce an allergic reaction. Non-sensitizing.
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	

No classification due to toxicological investigations.

SECTION 12: Ecological information

12.1 Toxicity

Range [%]	Substance
1 - 2,4	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)
	EL50, (48h), Daphnia magna: ~ 91,4 mg/l OECD 202 (ECHA CHEM).
	EL50, (96h), Selenastrum capricornutum: > 15 mg/l OECD 201 (ECHA CHEM).
	LL50, (96h), Oncorhynchus mykiss: ~ 24 mg/l OECD 203 (ECHA CHEM).

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 Other adverse effects

No classification on the basis of the calculation procedure of the preparation directive.

Ecological data of complete product are not available.

Do not discharge product unmonitored into the environment or into the drainage.

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!
Disposal in an incineration plant in accordance with the regulations of the local authorities.

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)

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

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 mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (1999/13/CE)	not applicable

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

16.1 R-phrases (SECTION 3)

R 43: May cause sensitisation by skin contact.
R 53: May cause long-term adverse effects in the aquatic environment.
R 22: Harmful if swallowed.
R 41: Risk of serious damage to eyes.
R 51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

16.2 Hazard statements (SECTION 3)

H226 Flammable liquid and vapour.
H411 Toxic to aquatic life with long lasting effects.
H318 Causes serious eye damage.
H302 Harmful if swallowed.
H413 May cause long lasting harmful effects to aquatic life.
H317 May cause an allergic skin reaction.

16.3 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

16.4 Other information

Modified position none

