

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

### 1.1 Product identifier

**Gear oil 75W - 90**  
**Article number: 32590**

### 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

**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)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

No classification.

### 2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

**Hazard pictograms** none

**Signal word** none

**Hazard statements** none

**Precautionary statements** none

**Special labelling** EUH210 Safety data sheet available on request.

Contains: Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched). EUH208 May produce an allergic reaction.

### 2.3 Other hazards

**Physico-chemical hazards** No particular hazards known.

**Environmental hazards** Does not contain any PBT or vPvB substances.  
Contains no ingredients with endocrine-disrupting properties.

**Other hazards** 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	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based
	CAS: 72623-87-1, EINECS/ELINCS: 276-738-4, EU-INDEX: 649-483-00-5, Reg-No.: 01-2119474889-13-XXXX
	GHS/CLP: Asp. Tox. 1: H304
1 - < 4,5	Polysulfides, di-tert-Bu
	CAS: 68937-96-2, EINECS/ELINCS: 273-103-3, Reg-No.: 01-2119540515-43-XXXX
	GHS/CLP: Skin Sens. 1: H317 - Aquatic Chronic 3: H412 SCL [%]: >= 46: Skin Sens. 1B: H317
0,1 - < 1	Magnesium metaborate
	CAS: 13703-82-7, EINECS/ELINCS: 237-235-5, Reg-No.: 01-2120769073-53-XXXX
	GHS/CLP: Skin Sens. 1B: H317 SCL [%]: > 15: Skin Sens. 1B: H317
1 - < 2,5	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, Reg-No.: 01-2119493620-38
	GHS/CLP: Acute Tox. 4: H302 - Eye Dam. 1: H318 - Skin Sens. 1: H317 - Aquatic Chronic 2: H411
	SCL [%]: > 50: Eye Irrit. 2: H319, >= 9,39: Skin Sens. 1B: H317, > 50: Eye Dam. 1: H318

#### Comment on component parts

For full text of H-statements and R-phrases: see SECTION 16.  
Contains less than 3% w/w DMSO-extract (only for mineral oils)

## 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 medical treatment.

#### Skin contact

In case of contact with skin wash off immediately with plenty of 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

Consult a doctor immediately.  
Do not induce vomiting.  
Rinse out mouth and give plenty of water to drink.

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

Allergic reactions

### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.  
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

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 within 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. 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.  
Cloths contaminated with product should not be kept in trouser pockets.  
Take off contaminated clothing and wash before reuse.  
Contaminated work clothing should not be allowed out of the workplace.

### 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 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 (UK)**

Substance
1-Decene, homopolymer, hydrogenated
CAS: 68037-01-4, EINECS/ELINCS: 500-183-1, Reg-No.: 01-2119486452-34-XXXX
Long-term exposure: 5 mg/m <sup>3</sup> , OSHA PEL

**Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)**

not relevant

**DNEL**

Substance
Polysulfides, di-tert-Bu, CAS: 68937-96-2
No DNEL values could be derived for the substance with respect to systemic effects.
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
Industrial, inhalative, Long-term - systemic effects, 2.73 mg/m <sup>3</sup>
Industrial, inhalative, Long-term - local effects, 5.58 mg/m <sup>3</sup>
Industrial, dermal, Long-term - systemic effects, 970 µg/kg bw/day
general population, inhalative, Long-term - local effects, 1.19 mg/m <sup>3</sup>
general population, inhalative, Long-term - systemic effects, 740 µg/kg bw/day
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, 4.28 mg/m <sup>3</sup> (AF=30)
Industrial, dermal, Long-term - systemic effects, 12.5 mg/kg bw/d (AF=120)
general population, dermal, Long-term - systemic effects, 6.25 mg/kg bw/d (AF=240)
general population, oral, Long-term - systemic effects, 0.25 mg/kg bw/d (AF=600)
general population, inhalative, Long-term - systemic effects, 1.09 mg/m <sup>3</sup> (AF=60)
Magnesium metaborate, CAS: 13703-82-7
Industrial, inhalative, Long-term - systemic effects, 5.49 mg/m <sup>3</sup>
Industrial, dermal, Long-term - systemic effects, 7.78 mg/kg bw/day
general population, inhalative, Long-term - systemic effects, 0.82 mg/m <sup>3</sup>
general population, dermal, Long-term - systemic effects, 0.278 mg/kg bw/day
general population, oral, Long-term - systemic effects, 0.28 mg/kg bw/day

**PNEC**

Substance
Polysulfides, di-tert-Bu, CAS: 68937-96-2
There are no PNEC values established for the substance.
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
oral (food), 9.33 mg/kg food
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)
freshwater, 2.4 µg/L (AF=50)
seawater, 0.24 µg/L (AF=500)
sewage treatment plants (STP), 24.33 mg/L (AF=100)
sediment (freshwater), 12.9 µg/kg dw
sediment (seawater), 1.29 µg/kg dw
soil, 1.17 µg/kg dw

oral (food), 10 mg/kg dw (AF=300)
Magnesium metaborate, CAS: 13703-82-7
freshwater, 0.05 mg/L
seawater, 0.05 mg/L
sewage treatment plants (STP), 100 mg/L
sediment (freshwater), 1.38 mg/kg sediment dw
sediment (seawater), 1.38 mg/kg sediment dw
soil, 0.247 mg/kg soil dw
oral (food), 1.67 mg/kg food

## 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>	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, >120 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. Do not inhale gases/vapours/aerosols. Avoid contact with eyes and skin.
<b>Respiratory protection</b>	not applicable
<b>Thermal hazards</b>	No information available.
<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
Form	liquid
Color	brown
Odor	characteristic
Odour threshold	No information available.
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point or initial boiling point and boiling range [°C]	No information available.
Flash point [°C]	210 (EN ISO 2592 (COC))
Flammability	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/cm <sup>3</sup> ]	0,86 (DIN 51757) (15 °C / 59,0 °F)
Relative density	not determined
Bulk density [kg/m <sup>3</sup> ]	not applicable
Solubility in water	miscible
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	No information available.
Kinematic viscosity	113,9 mm <sup>2</sup> /s (40°C) (DIN 51562)
Relative vapour density	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature [°C]	not applicable
Decomposition temperature [°C]	No information available.
Particle characteristics	No information available.

### 9.2 Other information

No information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

See SECTION 10.3.

### 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

No special measures necessary.

### **10.5 Incompatible materials**

Strong 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 hazard classes as defined in Regulation (EC) No 1272/2008**

**Acute oral toxicity**

Product
ATE-mix, oral, > 5000 mg/kg bw
Substance
Polysulfides, di-tert-Bu, CAS: 68937-96-2
No information available.
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
LD50, oral, Rat, 5000 mg/kg bw
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
Magnesium metaborate, CAS: 13703-82-7
LD50, oral, Rat, >2000 mg/kg bw (OECD 420)

**Acute dermal toxicity**

Product
dermal, Based on the available information, the classification criteria are not fulfilled.
Substance
Polysulfides, di-tert-Bu, CAS: 68937-96-2
No information available.
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
LD50, dermal, Rabbit, 2000 - 5000 mg/kg bw
Magnesium metaborate, CAS: 13703-82-7
LD50, dermal, Rat, 2000 mg/kg bw

**Acute inhalational toxicity**

Product
inhalative, Based on the available information, the classification criteria are not fulfilled.
Substance
Polysulfides, di-tert-Bu, CAS: 68937-96-2
No information available.
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
LC50, inhalative, Rat, 2.18 - 5.53 mg/L air, 4h

<b>Serious eye damage/irritation</b>	Based on the available information, the classification criteria are not fulfilled. Non-irritant. Classification was carried out based on substance-specific concentration limits.
<b>Skin corrosion/irritation</b>	Toxicological data of complete product are not available. No classification. Calculation method
<b>Respiratory or skin sensitisation</b>	Non-sensitizing. On basis of test data
<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.



repeated exposure

Substance
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
NOAEL, dermal, Rat, 30 - 2000 mg/kg bw/day
NOAEC, inhalative, Rat, 980 mg/m <sup>3</sup> air
LOAEL, oral, Rat, 125 mg/kg bw/day
Magnesium metaborate, CAS: 13703-82-7
NOAEL, oral, Rat, 125 mg/kg bw/day

<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 not fulfilled.
<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.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties	Contains no ingredients with endocrine-disrupting properties.
11.2.2 Other information	none

SECTION 12: Ecological information

12.1 Toxicity

Product
Based on the available information, the classification criteria are not fulfilled.
Substance
Polysulfides, di-tert-Bu, CAS: 68937-96-2
EC50, (72h), Algae, 100 mg/L
EL50, (48h), Invertebrates, 63 mg/L
NOELR, (48h), Invertebrates, 18 mg/L
NOELR, (72h), Algae, 100 mg/L
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
NOELR, (14d), fish, 1 g/L
LL50, (4d), Invertebrates, 10 g/L
LL50, (4d), fish, 100 mg/L
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)
LC50, (96h), fish, 24 mg/l
EC50, (48h), Daphnia magna, 91,4 mg/l
Magnesium metaborate, CAS: 13703-82-7
EL50, (24h), Daphnia magna, >50mg/l (OECD 202)
EL50, (72h), Pseudokirchneriella subcapitata, >50mg/l (OECD 201)
LL50, (96h), Oncorhynchus mykiss, >50mg/l (OECD 203)

## 12.2 Persistence and degradability

### Behaviour in environment compartments

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 Endocrine disrupting properties

Contains no ingredients with endocrine-disrupting properties.

## 12.7 Other adverse effects

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\* packaging containing residues of or contaminated by hazardous substances

## SECTION 14: Transport information

### 14.1 UN number or ID 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

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**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

**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 Maritime transport in bulk according to IMO instruments**

not applicable

## SECTION 15: Regulatory information

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

<b>EEC-REGULATIONS</b>	2008/98/EG (2000/532/EC ); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707
- <b>Comment on component parts</b>	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
- <b>Annex I (REACH)</b>	The product is not subject to Annex I restrictions.
- <b>Annex XIV (REACH)</b>	According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances $\geq$ 0.1% that are subject to authorisation.
- <b>Annex XVII (REACH)</b>	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product contains $\geq$ 0.1% of substances with the following restrictions. 75 According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product is not subject to any restrictions.
<b>TRANSPORT-REGULATIONS</b>	ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2024)
<b>NATIONAL REGULATIONS (UK):</b>	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- <b>Observe employment restrictions for people</b>	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- <b>VOC (2010/75/CE)</b>	not relevant

### 15.2 Chemical safety assessment

For this product a chemical safety assessment has not been carried out.

## SECTION 16: Other information

### 16.1 Hazard statements (SECTION 3)

H412 Harmful to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H302 Harmful if swallowed.  
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

Modified position none