

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

### 1.1 Product identifier

**febi 32590 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)

**Company** +49 2333 911-0

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Eye Irrit. 2: H319 Causes serious eye irritation.

### 2.2 Label elements

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

#### Hazard pictograms



#### Signal word

WARNING

#### Hazard statements

H319 Causes serious eye irritation.

#### Precautionary statements

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P280 Wear eye protection / face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 If eye irritation persists: Get medical advice / attention.

#### Special labelling

Contains: Polysulfides, di-tert-Bu, 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.

**Other hazards** No particular hazards known.

### SECTION 3: Composition / Information on ingredients

#### Product-type:

The product is a mixture.

Range [%]	Substance
25 - < 50	1-Decene, homopolymer, hydrogenated
	CAS: 68037-01-4, EINECS/ELINCS: 500-183-1, Reg-No.: 01-2119486452-34-XXXX
	GHS/CLP: Asp. Tox. 1: H304
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-XXXX
	GHS/CLP: Flam. Liq. 3: H226 - Acute Tox. 4: H302 - Skin Sens. 1: H317 - Eye Dam. 1: H318 - Aquatic Chronic 2: H411
0,1 - < 1	Triarylthiophosphat
	CAS: 597-82-0, EINECS/ELINCS: 209-909-9
	GHS/CLP: Repr. 2: H361fd - Aquatic Chronic 3: H412
2,5 - < 5	Polysulfides, di-tert-Bu
	CAS: 68937-96-2, EINECS/ELINCS: 273-103-3
	GHS/CLP: Skin Sens. 1: H317 - Aquatic Chronic 4: H413

#### 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

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

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 with 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.  
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

### 8.1 Control parameters

#### Ingredients with occupational exposure limits to be monitored (GB)

Range [%]	Substance
25 - < 50	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

#### DNEL

Range [%]	Substance
1 - < 2,5	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 <sup>3</sup> /8h (ECHA CHEM).
	Industrial, dermal, Long-term - systemic effects: 12,5 mg/kg/8h (ECHA CHEM).

#### PNEC

Range [%]	Substance
1 - < 2,5	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 (seawater), 0,313 mg/kg (ECHA CHEM).
	sediment (freshwater), 3,13 mg/kg (ECHA CHEM).
	seawater, 0,00012 mg/l (ECHA CHEM).
	freshwater, 0,0012 mg/l (ECHA CHEM).

### 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation.
<b>Eye protection</b>	Safety glasses.
<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).
<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 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.
<b>Respiratory protection</b>	not applicable
<b>Thermal hazards</b>	No information available.
<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	brown
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not applicable
Flash point [°C]	210 (EN ISO 2592 (COC))
Flammability (solid, gas) [°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]	0,866 (DIN 51757) (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	114 mm <sup>2</sup> /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

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.

### 10.5 Incompatible materials

Strong oxidizing agent.

### 10.6 Hazardous decomposition products

No hazardous decomposition products known.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product
ATE-mix, oral, > 5000 mg/kg bw.

Range [%]	Substance
25 - < 50	1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
	LD50, dermal, Rabbit: > 2000 mg/kg (Lit.).
	LD50, oral, Rat: > 2000 mg/kg (Lit.).
	LC50, inhalative, Rat: > 5000 mg/m <sup>3</sup> (Lit.).
1 - < 2,5	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).

<b>Serious eye damage/irritation</b>	not determined
<b>Skin corrosion/irritation</b>	not determined
<b>Respiratory or skin sensitisation</b>	Non-sensitizing.
<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>	

Toxicological data of complete product are not available.  
 The toxicological data are those of the pure product.

## SECTION 12: Ecological information

### 12.1 Toxicity

Range [%]	Substance
1 - < 2,5	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

<b>Behaviour in environment compartments</b>	not determined
<b>Behaviour in sewage plant</b>	not determined
<b>Biological degradability</b>	not determined

### 12.3 Bioaccumulative potential

No information available.

### 12.4 Mobility in soil

No information available.

**Ferdinand Bilstein GmbH + Co. KG**

Date printed 05.06.2015, Revision 05.06.2015

Version 05. Supersedes version: 04

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**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 MARPOL 73/78 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 (2015); IMDG-Code (2015, 37. Amdt.); IATA-DGR (2015).
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 Hazard statements (SECTION 3)

H412 Harmful to aquatic life with long lasting effects.  
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.  
H304 May be fatal if swallowed and enters airways.  
H413 May cause long lasting harmful effects to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.  
H318 Causes serious eye damage.  
H317 May cause an allergic skin reaction.  
H302 Harmful if swallowed.  
H226 Flammable liquid and vapour.

#### 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  
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



### 16.3 Other information

**Classification procedure**

Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)

**Modified position**

SECTION 2 deleted: WARNING

SECTION 2 deleted: Skin Sens. 1

SECTION 2 been added: Skin Irrit. 2

SECTION 2 been added: H315 Causes skin irritation.

SECTION 2 deleted: H317 May cause an allergic skin reaction.

SECTION 2 deleted: Ausrufezeichen

SECTION 2 deleted: H315 Causes skin irritation.

SECTION 2 deleted: Skin Irrit. 2

SECTION 2 been added: Eye Irrit. 2

SECTION 2 been added: Ausrufezeichen

SECTION 2 been added: WARNING

SECTION 2 been added: H319 Causes serious eye irritation.

SECTION 15 been added: 2 (self-classification)

SECTION 15 deleted: 1, gem. VwVwS vom 27.07.2005

SECTION 16 been added: Calculation method

SECTION 16 deleted: Calculation method