

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

### 1.1 Product identifier

**Gear Oil SAE 70W-80 (GL-5)**  
**Article number: 184247**

### 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  
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

Eye Irrit. 2: H319 Causes serious eye irritation.

### 2.2 Label elements

The product is classified as hazardous in accordance to OSHA Standard 29 CFR 1910.1200 (HCS 2012)

#### 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.

### 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.

This product is classified as hazardous in accordance to OSHA Standard 29 CFR 1910.1200.

### SECTION 3: Composition / Information on ingredients

#### 3.1 Substances

Not applicable

#### 3.2 Mixtures

The product is a mixture.

Range [%]	Substance
10 - < 20	1-Decene, homopolymer, hydrogenated CAS: 68037-01-4
1 - < 4.59	Polysulfide, Di-tert-butyl- CAS: 68937-96-2
1 - < 3	Aminsalz eines Phosphorsäureesters
0.1 - < 0.25	Imidazoline derivative CAS: 95-38-5

#### Comment on component parts

Contains less than 3% w/w DMSO-extract (only for mineral oils)  
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 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 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 (SO<sub>x</sub>).  
Nitrogen oxides (NO<sub>x</sub>).

### 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 (US)

Not applicable

#### DNEL

Substance
Polysulfide, Di-tert-butyl-, CAS: 68937-96-2
No DNEL values could be derived for the substance with respect to systemic effects.
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
There are no DNEL values established for the substance.
Imidazoline derivative, CAS: 95-38-5
Industrial, dermal, Acute - systemic effects, 2 mg/kg bw/day 2 mg/kg bw/day
Industrial, dermal, Long-term - systemic effects, 0.06 mg/kg bw/day
Industrial, inhalative, Acute - systemic effects, 14 mg/m <sup>3</sup>
Industrial, inhalative, Long-term - systemic effects, 0.46 mg/m <sup>3</sup>

#### PNEC

Substance
Polysulfide, Di-tert-butyl-, CAS: 68937-96-2
There are no PNEC values established for the substance.
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
There are no PNEC values established for the substance.
Imidazoline derivative, CAS: 95-38-5
soil, 75 µg/kg soil dw
sediment (seawater), 37.6 µg/kg sediment dw
sediment (freshwater), 376 µg/kg sediment dw
sewage treatment plants (STP), 270 µg/L
seawater, 3 ng/L
freshwater, 30 ng/L

### 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation. General 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.  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/vapors/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	yellow
Odor	characteristic
Odor threshold	No information available.
pH-value	Not applicable
pH-value [1%]	Not applicable
Boiling point [°C]	No information available.
Flash point [°C]	218
Flammability	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidizing properties	No
Vapor pressure/gas pressure [kPa]	No information available.
Density [g/cm <sup>3</sup> ]	0.85 (DIN 51757) (15 °C / 59,0 °F)
Relative density	Not determined
Bulk density [kg/m <sup>3</sup> ]	Not applicable
Solubility in water	immiscible
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	No information available.
Kinematic viscosity	50.2 mm <sup>2</sup> /s (40°C)
Relative vapour density	No information available.
Evaporation speed	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.



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### **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 toxicological effects

#### Acute oral toxicity

Substance
Polysulfide, Di-tert-butyl-, CAS: 68937-96-2
No information available.
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
LD50, oral, Rat, 2000 - 5000 mg/kg bw
NOAEL, oral, Rat, 1000 - 6771 mg/kg bw/day
Imidazoline derivative, CAS: 95-38-5
LD50, oral, Rat, 1265 mg/kg

#### Acute dermal toxicity

Substance
Polysulfide, Di-tert-butyl-, CAS: 68937-96-2
No information available.
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
LD50, dermal, Rat, 2000 mg/kg bw

#### Acute inhalational toxicity

Substance
Polysulfide, Di-tert-butyl-, CAS: 68937-96-2
No information available.
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
LC50, inhalative, Rat, 900 - 5200 mg/m <sup>3</sup> air

#### Serious eye damage/irritation

Toxicological data of complete product are not available.  
Irritant  
Calculation method

#### Skin corrosion/irritation

Toxicological data of complete product are not available.  
No classification.  
Calculation method

#### Respiratory or skin sensitisation

Toxicological data of complete product are not available.  
No classification.  
The classification occurred based on substance-specific concentration limits.

#### Specific target organ toxicity — single exposure

Based on the information available, the classification criteria have not been fulfilled.

#### Specific target organ toxicity — repeated exposure

Based on the information available, the classification criteria have not been fulfilled.

Substance
Imidazoline derivative, CAS: 95-38-5
NOAEL, oral, Rat, 20 mg/kg bw/day

#### Mutagenicity

Based on the information available, the classification criteria have not been fulfilled.

#### Reproduction toxicity

Based on the information available, the classification criteria have not been fulfilled.

#### Carcinogenicity

Based on the information available, the classification criteria have not been fulfilled.

#### Aspiration hazard

Based on the information available, the classification criteria have not been fulfilled.

#### General remarks

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.

## SECTION 12: Ecological information

### 12.1 Toxicity

Substance
Polysulfide, Di-tert-butyl-, CAS: 68937-96-2
EC50, (72h), Algae, 100 mg/L
EL50, (48h), Invertebrates, 63 mg/L
NOELR, (72h), Algae, 100 mg/L
NOELR, (48h), Invertebrates, 18 mg/L
1-Decene, homopolymer, hydrogenated, CAS: 68037-01-4
EL50, (48h), Algae, 1 g/L
EL50, (48h), Invertebrates, 1 g/L
LL50, (96h), fish, 1 g/L
Imidazoline derivative, CAS: 95-38-5
EC50, (72h), Algae, 16.9 - 30 µg/L
EC50, (48h), Invertebrates, 163 µg/L
LC0, (96h), fish, 180 µg/L

### 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

##### Product

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

##### Contaminated packaging

Uncontaminated packaging may be taken for recycling.  
Packaging that cannot be cleaned should be disposed of as for product.

##### RCRA Hazard Class (40CFR 261)

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities.

### SECTION 14: Transport

#### 14.1 UN 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

DOT Road Shipment Information (49 CFR) Not applicable

#### 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"

DOT Road Shipment Information (49 CFR) Not applicable

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**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

DOT Road Shipment Information (49 CFR) 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

DOT Road Shipment Information (49 CFR) 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

DOT Road Shipment Information (49 CFR) No

**14.6 Special precautions for user**

Relevant information under SECTION 6 to 8.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

Not applicable

## SECTION 15: Regulatory information

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

#### US Regulations

<b>National regulations</b>	29 CFR 1910.1200-HCS 2012, OSHA-PEL, ACGIH-TLV, NTP, IARC, SARA Title III, NFPA, TSCA, California - Prop. 65
- SARA, 302	No information available.
- SARA, 311	No information available.
- SARA, 313	No information available.
- CA Proposition 65	No components require labeling under California Proposition 65. No chemical substances in this material are named on the California P65 list.
- TSCA	All chemical substances in this material are included on or exempted from listing on the TSCA Inventory.
- FDA	No information available.
<b>American Conference of Governmental Industrial Hygienists - ACGIH</b>	No information available.
<b>International Agency for Research on Cancer IARC</b>	No information available.
<b>National Toxicology Program - NTP HAP-VOC</b>	No information available.
<b>Transport-regulations</b>	DOT-Classification, ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2023)

### 15.2 Chemical safety assessment

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

## SECTION 16: Other information

### 16.1 Abbreviations and acronyms:

ACGIH = American Conference of Governmental Industrial Hygienists;  
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;  
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act;  
CFR = Code of Federal Regulations;  
CPR = Controlled Products Regulations;  
DMEL = Derived Minimum Effect Level;  
DNEL = Derived No Effect Level;  
DOT = Department of Transportation;  
EC50 = Median effective concentration;  
EPA = Environmental Protection Agency;  
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;  
IARC = International Agency of Research on Cancer;  
IATA = International Air Transport Association;  
TSCA = Toxic Substance Control Act;  
HMIS = Hazardous Materials Identification System;  
NFPA = National Fire Protection Association;  
NIOSH = National Institute for Occupational Safety and Health;  
OSHA = Occupational Safety and Health Administration;  
LC50 = Lethal concentration, 50%;  
LD50 = Median lethal dose, 50%;  
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;  
SARA = Superfund Amendments and Reauthorization Act;  
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;

### 16.2 Ratings

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**NFPA Ratings**



TOP, FLAMMABILITY: 1 - Slight Hazard  
LEFT, HEALTH: 2 - Moderate Hazard  
RIGHT, REACTIVITY: 1 - Slight Hazard  
BOTTOM, SPECIAL NOTICE: -

**HMIS Ratings**

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	1
PERSONAL PROTECTION	X

2 - Moderate Hazard  
1 - Slight Hazard  
1 - Slight Hazard  
X - Personal protection rating to be supplied by user depending on use conditions

**PERSONAL PROTECTION:**

- A - Safety Glasses
- B - Safety Glasses and Gloves
- C - Safety Glasses, Gloves and Protection Apron
- D - Face Shield, Gloves and Protection Apron
- E - Safety Glasses, Gloves and Dust Respirator
- F - Safety Glasses, Gloves, Protection Apron and Dust Respirator
- G - Safety Glasses, Gloves and Vapor Respirator.
- H - Splash Goggles, Gloves, Protection Apron and Vapor Respirator.
- I - Safety Glasses, Gloves, Dust Respirator and Vapor Respirator.
- J - Splash Goggles, Gloves, Protection Apron, Dust Respirator and Vapor Respirator.
- K - Airline Mask or Hood, Gloves, Full Suit and Boots.
- X - Personal protection rating to be supplied by user depending on use conditions

**Modified position**

None