

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Gear oil SAE 75W-90 (GL-4/5)
Article number: 170140, 170141, 170142

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
 E-mail info@febi.com

Address enquiries to

Technical information info@febi.com
Safety Data Sheet 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
1 - < 10	Lubricating oils (< 3% DMSO-Extract)
	CAS: 74869-22-0, EINECS/ELINCS: 278-012-2, EU-INDEX: 649-484-00-0
	GHS/CLP: Asp. Tox. 1: H304
1 - < 4,59	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
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
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

Comment on component parts

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 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 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. 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.
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)

not relevant

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.
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched), CAS: -
Industrial, inhalative, Long-term - systemic effects, 4.28 mg/m ³ (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 ³ (AF=60)
Magnesium metaborate, CAS: 13703-82-7
Industrial, inhalative, Long-term - systemic effects, 5.49 mg/m ³
Industrial, dermal, Long-term - systemic effects, 7.78 mg/kg bw/day
general population, inhalative, Long-term - systemic effects, 0.82 mg/m ³
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.
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched), CAS: -
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

Additional advice on system design	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.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	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).
Skin protection	Light protective clothing.
Other	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.
Respiratory protection	not applicable
Thermal hazards	No information available.
Delimitation and monitoring of the environmental exposition	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	dark yellow
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]	202
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/cm³]	0,86 (DIN 51757) (15 °C / 59,0 °F)
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	immiscible
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	No information available.
Kinematic viscosity	119 mm ² /s (40°C)
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

Substance
Polysulfides, di-tert-Bu, CAS: 68937-96-2
No information available.
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched), CAS: -
LD50, oral, Rat, 2000 mg/kg
Magnesium metaborate, CAS: 13703-82-7
LD50, oral, Rat, >2000 mg/kg bw (OECD 420)

Acute dermal toxicity

Substance
Polysulfides, di-tert-Bu, CAS: 68937-96-2
No information available.
Magnesium metaborate, CAS: 13703-82-7
LD50, dermal, Rat, 2000 mg/kg bw

Acute inhalational toxicity

Substance
Polysulfides, di-tert-Bu, CAS: 68937-96-2
No information available.

Serious eye damage/irritation

Based on the available information, the classification criteria are not fulfilled.
 Non-irritant.
 Classification was carried out based on substance-specific concentration limits.
 The undiluted substance "931-384-6" is an irritant while the 50% formulation in mineral oil was not an irritant.

Skin corrosion/irritation

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

Respiratory or skin sensitisation

Non-sensitizing.
 On basis of test data
 May produce an allergic reaction.

Specific target organ toxicity — single exposure

Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure

Based on the available information, the classification criteria are not fulfilled.

Substance
Magnesium metaborate, CAS: 13703-82-7
NOAEL, oral, Rat, 125 mg/kg bw/day

Mutagenicity

Based on the available information, the classification criteria are not fulfilled.

Reproduction toxicity

Based on the available information, the classification criteria are not fulfilled.

Carcinogenicity

Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard

Based on the available information, the classification criteria are not 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.

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Page 8 / 12

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**

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
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched), CAS: -
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 The product floats on the (waste) water.
Can be separated out mechanically in purification plants.

Biological degradability No information available.

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

Waste no. (recommended) 130206*
 130206*

Contaminated packaging

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

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"

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Version 5.0. Supersedes version: 4.0 Page 10 / 12

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

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