

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

1.1 Product identifier

**High-performance oil for Haldex coupling
Article number: 101172**

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
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 Call NHS 111 or a doctor
+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.

2.3 Other hazards

Human health dangers The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Environmental hazards This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other hazards No particular hazards known.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

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3.2 Mixtures

The product is a mixture.

Range [%]	Substance
50 - < 100	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 - < 2,5	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts CAS: 85940-28-9, EINECS/ELINCS: 288-917-4, Reg-No.: 01-2119521201-61-XXXX GHS/CLP: Eye Dam. 1: H318 - Skin Irrit. 2: H315 - Aquatic Chronic 2: H411 SCL [%]: 15 - <20: Eye Irrit. 2: H319, 20 - 100: Eye Dam. 1: H318, 15 - 100: Skin Irrit. 2: H315

Comment on component parts

For full text of H-statements: 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 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

No information available.

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.
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.
Cool containers at risk with water spray jet.

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.
The product is combustible.
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.
Cloths contaminated with product should not be kept in trouser pockets.

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 (UK)

not relevant

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

not relevant

DNEL

Substance
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts, CAS: 85940-28-9
Industrial, inhalative, Long-term - systemic effects, 6,6 mg/m ³
Industrial, dermal, Long-term - systemic effects, 9,6 mg/kg bw/d
general population, inhalative, Long-term - systemic effects, 1,67 mg/m ³
general population, dermal, Long-term - systemic effects, 4,8 mg/kg bw/d
general population, oral, Long-term - systemic effects, 0,19 mg/kg bw/d
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
Industrial, inhalative, Long-term - systemic effects, 2,73 mg/m ³
Industrial, inhalative, Long-term - local effects, 5,58 mg/m ³
Industrial, dermal, Long-term - systemic effects, 970 µg/kg bw/day
general population, oral, Long-term - systemic effects, 0,74mg/kg bw/day

PNEC

Substance
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts, CAS: 85940-28-9
freshwater, 0,002 mg/l (AF=1000)
seawater, 0,0002 mg/l (AF=10000)
sewage treatment plants (STP), 100 mg/l (AF=100)
sediment (freshwater), 19,3 mg/kg dw
sediment (seawater), 1,93 mg/kg dw
soil, 15,7 mg/kg dw
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
oral (food), 9,33 mg/kg food

8.2 Exposure controls

Additional advice on system design

Ensure adequate ventilation on workstation.
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.
General exposure limit for oil mist should be noted.

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

Breathing apparatus in the event of aerosol or mist formation.
Short term: filter apparatus, combination filter A-P1. (DIN EN 14387)

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	light brown
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point or initial boiling point and boiling range [°C]	not determined
Flash point [°C]	208 °C/ 406°F
Flammability	Not highly flammable.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/cm³]	0,85 (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)	not determined
Kinematic viscosity	29,94 mm²/s 40°C [104°F] (DIN 51562)
Relative vapour density	not determined
Melting point [°C]	not determined
Auto-ignition temperature [°C]	not determined
Decomposition temperature [°C]	not determined
Particle characteristics	not applicable

9.2 Other information

none

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

Acute oral toxicity

Product
oral, Based on the available information, the classification criteria are not fulfilled.
Substance
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts, CAS: 85940-28-9
LD50, oral, Rat, 3080 mg/kg bw
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
LD50, oral, Rat, > 5000 mg/kg bw

Acute dermal toxicity

Product
dermal, Based on the available information, the classification criteria are not fulfilled.
Substance
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts, CAS: 85940-28-9
LD50, dermal, Rabbit, 20000 mg/kg bw
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
LD50, dermal, Rabbit, > 5000 mg/kg bw

Acute inhalational toxicity

Product
inhalative, Based on the available information, the classification criteria are not fulfilled.
Substance
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts, CAS: 85940-28-9
LC50, inhalative, Rat, 2.3 mg/L air, 4h
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
LC50, inhalative, Rat, > 5 mg/L, 4h

Serious eye damage/irritation

Based on the available information, the classification criteria are not fulfilled.
No classification due to substance-specific concentration limits.

Substance
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts, CAS: 85940-28-9
Eye, Causes serious eye damage.
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
Eye, non-irritating

Skin corrosion/irritation

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

Substance
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts, CAS: 85940-28-9
dermal, irritant
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
dermal, non-irritating

Respiratory or skin sensitisation

Based on the available information, the classification criteria are not fulfilled.
No classification due to substance-specific concentration limits.

Substance
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts, CAS: 85940-28-9
dermal, non-sensitizing
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1

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dermal, non-sensitizing

Specific target organ toxicity — single exposure Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled.

Substance
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts, CAS: 85940-28-9
NOAEL, oral, Rat, 125 mg/kg bw/day
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
NOAEC, inhalative, Rat, 980 mg/m ³ air
LOAEL, oral, Rat, 125 mg/kg bw/day

Mutagenicity Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled.

Substance
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
in vitro, negativ

Reproduction toxicity Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled.

- Fertility

Substance
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
NOAEL, oral, Rat, 1000 mg/kg bw/day

- Development No information available.

Carcinogenicity Does not contain a relevant substance that meets the classification criteria. 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.

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
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts, CAS: 85940-28-9
EC50, (48h), Invertebrates, 5.4 mg/L
EC50, (96h), Algae, 2 - 2.1 mg/L
NOEC, (21d), Invertebrates, 400 - 800 µg/L
LL50, (96h), Oncorhynchus mykiss, 4,5 mg/l
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
EL50, (48h), Invertebrates, > 10000 mg/L
LL50, (4d), Fish, > 100 mg/L

12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

Substance
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
(28d), 1 - 4 %, OECD 301 B, The product is not readily biodegradable.

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)

130208*

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

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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 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 (2025); IMDG-Code (2025, 42. Amdt.); IATA-DGR (2025)
NATIONAL REGULATIONS (UK):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	none
- VOC (2010/75/CE)	not relevant

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)

H318 Causes serious eye damage.
H411 Toxic to aquatic life with long lasting effects.
H315 Causes skin irritation.
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**

1.3, 2.3, 3.2, 8.1, 9.1, 11.1, 15.1, 16.2, 16.3