

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

### 1.1 Product identifier

**High-performance oil for Haldex coupling  
Article number: 101171**

### 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

No classification.

### 2.2 Label elements

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

**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

**Environmental hazards** Does not contain any PBT or vPvB substances.

**Other hazards** No particular hazards known.

This product is classified as non-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
50 - < 100	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based CAS: 72623-87-1
1 - < 2,5	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl) and iso-Bu and iso-Pr) esters, zinc salts CAS: 85940-28-9
0,1 - <1	Sulfonic acids, petroleum, calcium salts CAS: 61789-86-4

**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

<b>General information</b>	Change soaked clothing.
<b>Inhalation</b>	Ensure supply of fresh air. In the event of symptoms seek medical treatment.
<b>Skin contact</b>	In case of contact with skin wash off immediately with soap and water. Consult a doctor if skin irritation persists.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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 the doctor.

## SECTION 5: Fire-fighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	Foam, dry powder, water spray jet, carbon dioxide.
<b>Extinguishing media that must not be used</b>	Full water jet.

### 5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.  
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 with 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 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.

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 (US)**

Substance
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based
CAS: 72623-87-1
Long-term exposure: 5 mg/m <sup>3</sup> , ACGIH, TWA, Oil mist

**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 <sup>3</sup>
Industrial, dermal, Long-term - systemic effects, 9,6 mg/kg bw/d
general population, inhalative, Long-term - systemic effects, 1,67 mg/m <sup>3</sup>
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 <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
Sulfonic acids, petroleum, calcium salts, CAS: 61789-86-4
Industrial, inhalative, Long-term - systemic effects, 11,75 mg/m <sup>3</sup>
Industrial, dermal, Long-term - systemic effects, 3,33 mg/kg bw/day
Industrial, dermal, Long-term - local effects, 1,03 mg/cm <sup>2</sup>
general population, inhalative, Long-term - systemic effects, 2,9 mg/m <sup>3</sup>
general population, dermal, Long-term - systemic effects, 1,667 mg/kg bw/day
general population, dermal, Long-term - local effects, 0,513 mg/cm <sup>2</sup>
general population, oral, Long-term - systemic effects, 0,833 mg/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
Sulfonic acids, petroleum, calcium salts, CAS: 61789-86-4
freshwater, 1 mg/L
seawater, 1 mg/L
sewage treatment plants (STP), 1000 mg/L
sediment (freshwater), 226 000 000 mg/kg sediment dw
sediment (seawater), 226 000 000 mg/kg sediment dw



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soil, 271 000 000 mg/kg soil dw
oral (food), 16,667 mg/kg food

**8.2 Exposure controls**

<b>Additional advice on system design</b>	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 limit for oil mist should be noted.
<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/vapors/aerosols. Avoid contact with eyes and skin.
<b>Respiratory protection</b>	Breathing apparatus in the event of aerosol or mist formation. Short term: filter apparatus, combination filter A-P1. (DIN EN 14387)
<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	light brown
Odor	characteristic
Odor threshold	Not determined
pH-value	Not applicable
pH-value [1%]	Not applicable
Boiling point or initial boiling point and boiling range [°C]	Not applicable
Flash point [°C]	208 °C/ 406°F
Flammability	Not explosive.
Lower explosion limit	not self-igniting
Upper explosion limit	Not applicable
Oxidizing properties	No
Vapor pressure/gas pressure [kPa]	Not determined
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 (log value)	Not determined
Kinematic viscosity	29,94 mm <sup>2</sup> /s 40°C [104°F] (DIN 51562)
Relative vapour density	Not determined
Melting point [°C]	Not determined
Auto-ignition temperature [°C]	Not applicable
Decomposition temperature [°C]	Not determined
Particle characteristics	Not applicable

### 9.2 Other information

No information available.

## 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 alkalis.  
Reactions with strong acids.

### 10.4 Conditions to avoid

Strong heating.



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### **10.5 Incompatible materials**

Strong oxidizing agent.  
See SECTION 10.3.

### **10.6 Hazardous decomposition products**

No hazardous decomposition products known.



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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute oral toxicity

Product
oral, Based on the information available, the classification criteria have not been 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
Sulfonic acids, petroleum, calcium salts, CAS: 61789-86-4
LD50, oral, Rat, > 5000 mg/kg, OECD 401

#### Acute dermal toxicity

Product
dermal, Based on the information available, the classification criteria have not been 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, > 20 000 mg/kg bw
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
LD50, dermal, Rabbit, 2000 - 5000 mg/kg bw
Sulfonic acids, petroleum, calcium salts, CAS: 61789-86-4
LD50, dermal, Rabbit, > 4000 mg/kg, OECD 402

#### Acute inhalational toxicity

Product
inhalative, Based on the information available, the classification criteria have not been fulfilled.
Substance
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts, CAS: 85940-28-9
LC50, inhalativ (vapor ), Rat, > 2,3 mg/L/4h
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, CAS: 72623-87-1
LC50, inhalative, Rat, 2.18 - 5.53 mg/L air, 4h
Sulfonic acids, petroleum, calcium salts, CAS: 61789-86-4
LC50, inhalative, Rat, > 1,9 mg/L (4h)

#### Serious eye damage/irritation

Toxicological data of complete product are not available.  
Non-irritant.  
No classification due to substance-specific concentration limits.

Substance
Sulfonic acids, petroleum, calcium salts, CAS: 61789-86-4
Eye, non-irritating

#### Skin corrosion/irritation

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

Substance
Sulfonic acids, petroleum, calcium salts, CAS: 61789-86-4





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dermal, non-irritating
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**Respiratory or skin sensitisation** Toxicological data of complete product are not available.  
No classification due to substance-specific concentration limits.

Substance
Sulfonic acids, petroleum, calcium salts, CAS: 61789-86-4
dermal, sensitising

**Specific target organ toxicity — single exposure** Based on the information available, the classification criteria have not been fulfilled.

Substance
Sulfonic acids, petroleum, calcium salts, CAS: 61789-86-4
inhalative, no adverse effect observed

**Specific target organ toxicity — repeated exposure** Based on the information available, the classification criteria have not been fulfilled.

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
Sulfonic acids, petroleum, calcium salts, CAS: 61789-86-4
NOAEL, oral, Rat, 500 mg/kg bw/day, The effects observed are not sufficient for classification.
NOAEL, dermal, Rat, 1000 mg/kg bw/day, no adverse effect observed
NOAEC, inhalative, Rat, 881,58 mg/m <sup>3</sup> , The effects observed are not sufficient for classification.

**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

Product
Based on the information available, the classification criteria have not been fulfilled.
Substance
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts, CAS: 85940-28-9
LL50, (96h), Oncorhynchus mykiss, 4,5 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
Sulfonic acids, petroleum, calcium salts, CAS: 61789-86-4
LC50, (96h), fish, > 10 mg/l (OECD 203)
EC50, (3h), Activated sludge, > 10 mg/l (OECD 209)

### 12.2 Persistence and degradability

Behaviour in environment compartments	Not determined
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

The mixture contains the following substances with endocrine disrupting potential.: Branched alkyl phenol

### 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.
- 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>	Does not contain any relevant substances fulfilling the classification criteria.
<b>International Agency for Research on Cancer IARC</b>	Does not contain any relevant substances fulfilling the classification criteria.
<b>National Toxicology Program - NTP</b>	Does not contain any relevant substances fulfilling the classification criteria.
<b>HAP-VOC</b>	Not applicable
<b>Transport-regulations</b>	DOT-Classification, ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2024)

### 15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not 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: 0 - Minimal Hazard  
RIGHT, REACTIVITY: 1 - Slight Hazard  
BOTTOM, SPECIAL NOTICE: -

**HMIS Ratings**

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	1
PERSONAL PROTECTION	X

1 - Slight 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**

3.2, 8.1, 9.1, 15.1, 16.2, 16.3