

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

### 1.1 Product identifier

**High performance grease**  
**Article number: 105417**

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1 Relevant uses

Grease

#### 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 [REGULATION (GB) CLP]

Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects.

### 2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

**Hazard pictograms** none

**Signal word** none

**Hazard statements** H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements** P273 Avoid release to the environment.  
P501 Dispose of contents / container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Special labelling** Contains: Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3), Reaction products of triphenyl phosphite and isodecanol (1:1), 2,6-di-tert-butyl-4-nonylphenol. EUH208 May produce an allergic reaction.

### 2.3 Other hazards

**Human health dangers** Has a degreasing effect on the skin.  
High Pressure Applications. Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency.

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

**Other hazards** Further hazards were not determined with the current level of knowledge.

### SECTION 3: Composition / Information on ingredients

#### 3.1 Substances

not applicable

#### 3.2 Mixtures

The product is a mixture.

Range [%]	Substance
< 1	Reaction products of triphenyl phosphite and isodecanol (1:1) CAS: 26544-23-0, EINECS/ELINCS: 701-341-4, Reg-No.: 01-2119968254-31 GHS/CLP: Skin Sens. 1: H317 - STOT RE 2: H373 - Aquatic Chronic 2: H411
< 1	Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3) CAS: Polymer, EINECS/ELINCS: 412-780-3, EU-INDEX: 042-004-00-5, Reg-No.: 01-0000016000-92-XXXX GHS/CLP: Eye Irrit. 2: H319 - Skin Irrit. 2: H315 - Skin Sens. 1: H317 - Aquatic Chronic 2: H411
< 1	Zinc sulphate Monohydrate CAS: 7446-19-7, EINECS/ELINCS: 231-793-3, EU-INDEX: 030-006-00-9 GHS/CLP: Acute Tox. 4: H302 - Eye Dam. 1: H318 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M-Factor (acute): 1, M-Factor (chronic): 1
≤ 0.3	2,6-di-tert-butyl-4-nonylphenol CAS: 4306-88-1, EINECS/ELINCS: 224-320-7, Reg-No.: 01-2120759723-46-XXXX GHS/CLP: Skin Sens. 1B: H317 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M-Factor (acute): 1, M-Factor (chronic): 1

#### Comment on component parts

Highly refined mineral oil and additives. Thickener.  
Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.  
For full text of H-statements: see SECTION 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General information

Take off contaminated clothing and wash before reuse.

##### 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

Get medical advice.  
Do not induce vomiting.

#### 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.  
Note: High Pressure Applications  
Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimise tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.

## SECTION 5: Fire-fighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** Carbon dioxide.  
Dry powder.  
Foam.

**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)  
Metal oxides.  
Phosphorus oxides (PO<sub>x</sub>).  
Carbon dioxide (CO<sub>2</sub>)

### 5.3 Advice for firefighters

Use self-contained breathing apparatus.  
Heat causes increase in pressure and risk of bursting - Keep away from the container.  
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.  
Collect contaminated firefighting water separately, must not be discharged into the drains.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.  
High risk of slipping due to leakage/spillage of product.  
Use personal protective equipment.  
Use breathing apparatus if exposed to vapours/aerosol.

### 6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.  
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

### 6.3 Methods and material for containment and cleaning up

Take up mechanically.  
Take up residues 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

Avoid formation of oil dust.  
Use only in well-ventilated areas.

Do not eat, drink or smoke when using this product.  
Wash hands before breaks and after work.  
Use barrier skin cream.  
Take off contaminated clothing and wash before reuse.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep only in original container.

Do not store together with oxidizing agents.

Keep container tightly closed and store it at a well-ventilated place.

Protect from heat/overheating and from sun.

Keep in a cool place. Store in a dry 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 (GB)**

not relevant

**DNEL**

Substance
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3), CAS: Polymer
Industrial, dermal, Long-term - systemic effects, 0.933 mg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 3.29 mg/m <sup>3</sup>
general population, oral, Long-term - systemic effects, 0.333 mg/kg bw/day
general population, dermal, Long-term - systemic effects, 0.333 mg/kg bw/day
general population, inhalative, Long-term - systemic effects, 0.493 mg/m <sup>3</sup>
2,6-di-tert-butyl-4-nonylphenol, CAS: 4306-88-1
Industrial, dermal, Long-term - systemic effects, 1.11 mg/kg bw/d (AF=900)
Industrial, inhalative, Long-term - systemic effects, 7.84 mg/m <sup>3</sup> (AF= 225)
general population, inhalative, Long-term - systemic effects, 1.93 mg/m <sup>3</sup> (AF=450)
general population, dermal, Long-term - systemic effects, 0.56 mg/kg bw/d (AF=1800)
Reaction products of triphenyl phosphite and isodecanol (1:1), CAS: 26544-23-0
worker, dermal, Long-term - systemic effects, 0.15 mg/kg bw/d (AF= 200)
worker, inhalative, Long-term - systemic effects, 0.53 mg/m <sup>3</sup> (AF= 50)

**PNEC**

Substance
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3), CAS: Polymer
sediment (seawater), 0.563 mg/kg dw
sediment (freshwater), 5.63 mg/kg dw
soil, 1.25 mg/kg dw (AF= 50)
sewage treatment plants (STP), 100 mg/L (AF=10)
seawater, 0 mg/L(AF=10000)
freshwater, 0.004 mg/L(AF=1000)
2,6-di-tert-butyl-4-nonylphenol, CAS: 4306-88-1
soil, 21.1 mg/kg dw
sediment (seawater), 10.6 mg/kg dw
sediment (freshwater), 106 mg/kg dw
sewage treatment plants (STP), 10 mg/L (AF= 100)
seawater, 0.012 µg/L (AF= 10 000)
freshwater, 0.124 µg/L (AF= 1000)

## 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation.
<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, >480 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. Avoid contact with eyes and skin. Do not breathe vapour/spray.
<b>Respiratory protection</b>	Not required under normal conditions. With excess of the limit value use breathing apparatus. Short term: filter apparatus, combination filter A-P2. (DIN EN 14387)
<b>Thermal hazards</b>	not applicable
<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

<b>Physical state</b>	liquid
<b>Form</b>	Grease
<b>Color</b>	dark brown
<b>Odor</b>	mild
<b>Odour threshold</b>	No information available.
<b>pH-value</b>	not applicable
<b>pH-value [1%]</b>	not applicable
<b>Boiling point [°C]</b>	not applicable
<b>Flash point [°C]</b>	268 (open cup)
<b>Flammability (solid, gas) [°C]</b>	not determined
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Oxidising properties</b>	no
<b>Vapour pressure/gas pressure [kPa]</b>	< 0.01 (20 °C)
<b>Density [g/cm<sup>3</sup>]</b>	< 1 (20 °C / 68,0 °F)
<b>Relative density</b>	No information available.
<b>Bulk density [kg/m<sup>3</sup>]</b>	not applicable
<b>Solubility in water</b>	insoluble
<b>Solubility other solvents</b>	No information available.
<b>Partition coefficient [n-octanol/water]</b>	No information available.
<b>Kinematic viscosity</b>	not applicable
<b>Relative vapour density</b>	not relevant
<b>Evaporation speed</b>	not relevant
<b>Melting point [°C]</b>	No information available.
<b>Auto-ignition temperature [°C]</b>	No information available.
<b>Decomposition temperature [°C]</b>	No information available.
<b>Particle characteristics</b>	No information available.

### 9.2 Other information

No information available.

## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

No dangerous reactions known if used as directed.

### **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**

Keep away from open flames, hot surfaces and sources of ignition.

### **10.5 Incompatible materials**

Strong oxidizing agent.

### **10.6 Hazardous decomposition products**

No hazardous decomposition products known.  
In the event of fire: See SECTION 5.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute oral toxicity

Product
Based on the available information, the classification criteria are not fulfilled.
Substance
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3), CAS: Polymer
LD50, oral, Rat, > 2000 mg/kg bw
Zinc sulphate Monohydrate, CAS: 7446-19-7
LD50, oral, Rat, 2949 mg/kg (Anhydrous)
2,6-di-tert-butyl-4-nonylphenol, CAS: 4306-88-1
LD50, oral, Rat, > 2000 mg/kg bw, OECD 401
Reaction products of triphenyl phosphite and isodecanol (1:1), CAS: 26544-23-0
LD50, oral, Rat, 3840 - 6730 mg/kg bw

#### Acute dermal toxicity

Product
Based on the available information, the classification criteria are not fulfilled.
Substance
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3), CAS: Polymer
LD50, dermal, Rat, > 2000 mg/kg bw
2,6-di-tert-butyl-4-nonylphenol, CAS: 4306-88-1
LD50, dermal, Rat, > 2000 mg/kg bw, OECD 402
Reaction products of triphenyl phosphite and isodecanol (1:1), CAS: 26544-23-0
LD50, dermal, Rabbit, > 5000 mg/kg bw

#### Acute inhalational toxicity

Product
Based on the available information, the classification criteria are not fulfilled.
Substance
Reaction products of triphenyl phosphite and isodecanol (1:1), CAS: 26544-23-0
LC50, inhalativ (mist), Rat, > 8.4 mg/L

#### Serious eye damage/irritation

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

Substance
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3), CAS: Polymer
irritant
2,6-di-tert-butyl-4-nonylphenol, CAS: 4306-88-1
Eye, Rabbit, OECD 405, non-irritating

#### Skin corrosion/irritation

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

Substance
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3), CAS: Polymer
Harmonised classification: Skin Irrit. 2 H315

2,6-di-tert-butyl-4-nonylphenol, CAS: 4306-88-1
dermal, Rabbit, OECD 404, 4h, non-corrosive

**Respiratory or skin sensitisation**      May produce an allergic reaction.  
Calculation method

Substance
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3), CAS: Polymer
Harmonised classification: Skin Sens. 1 H317
2,6-di-tert-butyl-4-nonylphenol, CAS: 4306-88-1
dermal, Cell culture, OECD 429, sensitising

**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.

**Mutagenicity**      There is no evidence of any mutagenic effects.  
Based on the available information, the classification criteria are not fulfilled.

**Reproduction toxicity**      There is no evidence of any reproductive toxicity effects.  
Based on the available information, the classification criteria are not fulfilled.

**Carcinogenicity**      There is no evidence of any carcinogenic effects.  
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**      May cause respiratory tract irritation.  
Has a degreasing effect on the skin.  
Frequent persistent contact with the skin can cause dermatitis.  
  
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. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

**11.2 Information on other hazards**

**Endocrine disrupting properties**      No information available.

**Other information**      No information available.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Substance
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3), CAS: Polymer
LC50, (96h), Cyprinus carpio, > 10 mg/L
EC50, (48h), Daphnia magna, 6.8 mg/L
NOEC, (48h), Daphnia magna, 3.6 mg/L
NOELR, (72h), Desmodesmus subspicatus, >= 12.5 mg/L
Zinc sulphate Monohydrate, CAS: 7446-19-7
EC50, (48h), Daphnia magna, 0.15 mg/l
IC50, Scenedesmus subspicatus, 0.52 mg/l (5d)(Anhydrous)
2,6-di-tert-butyl-4-nonylphenol, CAS: 4306-88-1
LC50, (96h), Rainbow trout, > 10 mg/L
EC50, (72h), Pseudokirchneriella subcapitata, 100 mg/L
EC50, (48h), Daphnia magna, 0.124 mg/L

## 12.2 Persistence and degradability

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

## 12.3 Bioaccumulative potential

No information available.

## 12.4 Mobility in soil

The product is insoluble in water.

## 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

No information available.

## 12.7 Other adverse effects

The product is insoluble in water.  
Ecological data of complete product are not available.  
The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.  
Do not discharge product unmonitored into the environment.

## 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

Disposal in an incineration plant in accordance with the regulations of the local authorities.  
For recycling, consult manufacturer.

#### Waste no. (recommended)

120112\* spent waxes and fats

#### Contaminated packaging

Uncontaminated packaging may be taken for recycling.  
Uncontaminated packaging may be reused.  
Dispose full / partially emptied cartridges as hazardous waste in accordance with official regulations.

#### 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

**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

### SECTION 15: Regulatory information

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

<b>EEC-REGULATIONS</b>	2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014
<b>TRANSPORT-REGULATIONS</b>	ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2023)
<b>NATIONAL REGULATIONS (GB):</b>	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 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)

H373 May cause damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.  
H317 May cause an allergic skin reaction.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H410 Very toxic to aquatic life with long lasting effects.  
H400 Very toxic to aquatic life.  
H318 Causes serious eye damage.  
H302 Harmful if swallowed.

## 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

Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects. (Calculation method)

### Modified position

SECTION 3 been added: Reaction products of triphenyl phosphite and isodecanol (1:1)