

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

1.1 Product identifier

febi 31942 grease
Article number 31941, 31942

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

For all uses not specified in SECTION 1.2.1

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)

Company +49 2333 911-0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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 GHS/CLP-Directives.

Hazard pictograms

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

Precautionary statements P273 Avoid release to the environment.

2.3 Other hazards

Physico-chemical hazards No particular hazards known.

Human health dangers Frequent persistent contact with the skin can cause skin irritation.

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards none

SECTION 3: Composition / Information on ingredients

Product-type:

The product is a mixture.

| Range [%] | Substance |
|------------|--|
| 1 - < 2,5 | Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS: 4259-15-8, EINECS/ELINCS: 224-235-5, Reg-No.: 01-2119493635-27 GHS/CLP: Eye Dam. 1: H318 - Aquatic Chronic 2: H411 |
| 0,25 - < 1 | 2,6-di-tert-butyl-p-cresol CAS: 128-37-0, EINECS/ELINCS: 204-881-4, Reg-No.: 01-2119555270-46-XXXX GHS/CLP: Aquatic Chronic 1: H410 - Aquatic Acute 1: H400, M = 1 |
| 0,25 - < 1 | Naphthenic acids, zinc salts CAS: 12001-85-3, EINECS/ELINCS: 234-409-2 GHS/CLP: Skin Irrit. 2: H315 - Aquatic Chronic 1: H410 |

Comment on component parts

Substances of Very High Concern - SVHC: substances are not contained or are below 0,1%.
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 for medical treatment.

Skin contact

When in contact with the skin, clean 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.
Seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects

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

Carbon dioxide.
Dry powder.
Water spray jet.
Alcohol-resistant 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)

5.3 Advice for firefighters

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

High risk of slipping due to leakage/spillage of product.
Forms slippery surfaces with water.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
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 dangerous reactions known if used as directed.

Do not eat, drink, smoke or take drugs at work.
Wash hands before breaks and after work.
Cloths contaminated with product should not be kept in trouser pockets.
Use barrier skin cream.
Contaminated work clothing should not be allowed out of the workplace.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Prevent penetration into the ground.
Keep only in original tightly closed container.
Do not store together with food and animal food/diet.
Keep 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 (GB)

| Range [%] | Substance |
|-----------|--|
| 0,1 - < 1 | 2,6-di-tert-butyl-p-cresol |
| | CAS: 128-37-0, EINECS/ELINCS: 204-881-4 |
| | Long-term exposure: 10 mg/m ³ |

DNEL

| Range [%] | Substance |
|------------|--|
| 1 - < 2,5 | Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8 |
| | 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, oral, Long-term - systemic effects: 0,19 mg/kg bw/d. |
| | general population, dermal, Long-term - systemic effects: 4,8 mg/kg bw/d. |
| | general population, inhalative, Long-term - systemic effects: 1,67 mg/m ³ . |
| 0,25 - < 1 | 2,6-di-tert-butyl-p-cresol, CAS: 128-37-0 |
| | Industrial, dermal, Long-term - systemic effects: 8,3 mg/kg. |
| | Industrial, inhalative, Long-term - systemic effects: 5,8 mg/m ³ . |
| | general population, inhalative, Long-term - systemic effects: 1,74 mg/m ³ . |
| | general population, dermal, Long-term - systemic effects: 5 mg/kg. |

PNEC

| Range [%] | Substance |
|------------|--|
| 1 - < 2,5 | Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8 |
| | oral (food), 8,33 mg/kg food. |
| | soil, 0,0548 mg/kg dw. |
| | sediment (seaater), 0,00701 mg/kg dw. |
| | sediment (freshwater), 0,0701 mg/kg dw. |
| | sewage treatment plants (STP), 3,8 mg/l. |
| | seawater, 4,6 µg/l. |
| | freshwater, 4 µg/l. |
| 0,25 - < 1 | 2,6-di-tert-butyl-p-cresol, CAS: 128-37-0 |
| | sewage treatment plants (STP), 100 mg/l. |
| | seawater, 0,0004 mg/l. |
| | freshwater, 0,004 mg/l. |
| | oral (food), 16,7 mg/kg. |
| | sediment (freshwater), 1,29 mg/kg. |
| | soil, 1,04 mg/kg. |

Ferdinand Bilstein GmbH + Co. KG

Date printed 08.06.2015, Revision 08.06.2015

Version 04. Supersedes version: 03

Page 5 / 9

8.2 Exposure controls

| | |
|--|--|
| Additional advice on system design | Ensure adequate ventilation on workstation. |
| Eye protection | If there is a risk of splashing: safety glasses |
| Hand protection | The details concerned are recommendations. Please contact the glove supplier for further information. Nitrile rubber, >480 min (EN 374). |
| Skin protection | Protective clothing. |
| Other | Avoid contact with eyes and skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of these equipments to chemicals should be ascertained with the respective supplier. |
| Respiratory protection | not applicable |
| Thermal hazards | none |
| Delimitation and monitoring of the environmental exposition | See SECTION 6+7. |

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|----------------------------------|
| Form | pasty |
| Color | light brown |
| Odor | characteristic |
| Odour threshold | not determined |
| pH-value | not applicable |
| pH-value [1%] | not applicable |
| Boiling point [°C] | not applicable |
| Flash point [°C] | not applicable |
| Flammability (solid, gas) [°C] | not determined |
| Lower explosion limit | not applicable |
| Upper explosion limit | not applicable |
| Oxidizing properties | no |
| Vapour pressure/gas pressure [kPa] | not determined |
| Density [g/ml] | 1,15 (DIN 51757) (25°C / 77,0°F) |
| Bulk density [kg/m³] | not applicable |
| Solubility in water | insoluble |
| Partition coefficient [n-octanol/water] | not determined |
| Viscosity | NLGI 2 |
| Relative vapour density determined in air | not applicable |
| Evaporation speed | not applicable |
| Melting point [°C] | not determined |
| Autoignition temperature [°C] | not applicable |
| Decomposition temperature [°C] | not determined |

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with acids, alkalis and oxidizing agents.

10.4 Conditions to avoid

See SECTION 7.2.
 Strong heating.

10.5 Incompatible materials

Oxidizing agent
 Acids

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| |
|---------------------------------|
| Product |
| ATE-mix, oral, > 2000 mg/kg bw. |

| Range [%] | Substance |
|------------|--|
| 1 - < 2,5 | Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8 |
| | LD50, dermal, Rabbit: > 5000 mg/kg bw (OECD 402). |
| | LD50, oral, Rat: > 3100 mg/kg bw (OECD 401). |
| 0,25 - < 1 | 2,6-di-tert-butyl-p-cresol, CAS: 128-37-0 |
| | LD50, dermal, Rat: > 5000 mg/kg bw (OECD 402). |
| | LD50, oral, Rat: > 5000 mg/kg bw (OECD 401). |
| | NOEL, oral, Rat: 25 mg/kg/28d. |

| | |
|---|---|
| Serious eye damage/irritation | CAS: 4259-15-8 (< 50%) Slight irritant effect - does not require labelling. |
| Skin corrosion/irritation | not determined |
| Respiratory or skin sensitisation | not determined |
| Specific target organ toxicity — single exposure | not determined |
| Specific target organ toxicity — repeated exposure | not determined |
| Mutagenicity | not determined |
| Reproduction toxicity | not determined |
| Carcinogenicity | not determined |
| 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. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 12: Ecological information

12.1 Toxicity

| Range [%] | Substance |
|------------|--|
| 1 - < 2,5 | Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8 |
| | LC50, (96h), Oncorhynchus mykiss: 1 - 10 mg/l. |
| | EC50, (72h), Desmodesmus subspicatus: > 240 mg/l. |
| | EC50, (48h), Daphnia magna: 1 - 10 mg/l (OECD 202). |
| 0,25 - < 1 | 2,6-di-tert-butyl-p-cresol, CAS: 128-37-0 |
| | LC50, (96h), Danio rerio: > 0,57 mg/l. |
| | EC50, (48h), Daphnia magna: > 0,17 mg/l. |
| | IC50, (72h), Desmodesmus subspicatus: > 0,42 mg/l. |
| | NOEC, (21d), Daphnia magna: > 0,39 mg/l. |

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 Other adverse effects

Ecological data of complete product are not available.

Do not discharge product unmonitored into the environment or into the drainage.

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

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!
For recycling, consult manufacturer.

Waste no. (recommended)

120112* spent waxes and fats

Contaminated packaging

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

Waste no. (recommended)

150110*
150102
150104

SECTION 14: Transport information

14.1 UN number

See SECTION 14.2 in accordance with UN shipping name

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)

See SECTION 14.2 in accordance with UN shipping name

14.4 Packing group

See SECTION 14.2 in accordance with UN shipping name

14.5 Environmental hazards

See SECTION 14.2 in accordance with UN shipping name

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS 1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC

TRANSPORT-REGULATIONS DOT-Classification, ADR (2015); IMDG-Code (2015, 37. Amdt.); IATA-DGR (2015).

NATIONAL REGULATIONS (GB): EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4

- Observe employment restrictions for people no

- VOC (1999/13/CE) 0%

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H315 Causes skin irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H318 Causes serious eye damage.

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
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
ELINCS = European List of Notified Chemical Substances
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
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
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
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: Naphthenic acids, zinc salts

SECTION 3 been added: 2,6-di-tert-butyl-p-cresol

SECTION 3 deleted: Naphthenic acids, zinc salts

SECTION 3 deleted: 2,6-di-tert-butyl-p-cresol

SECTION 3 deleted: zinc bis(2-ethylhexanoate)