

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 [REGULATION (EC) No 1272/2008]

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 (EC) No 1272/2008 (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: 5,5'-Dithiodi-1,3,4-thiadiazole-2(3H)-thione, Zinc naphthenate. EUH208 May produce an allergic reaction.

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

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
5 - < 10	Dilithium azelate CAS: 38900-29-7, EINECS/ELINCS: 254-184-4, Reg-No.: 01-2120119814-57-XXXX GHS/CLP: Acute Tox. 4: H302
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-XXXX GHS/CLP: Eye Dam. 1: H318 - Aquatic Chronic 2: H411 SCL [%]: >50 - <=100: Eye Dam. 1: H318
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-Factor (acute): 1, M-Factor (chronic): 1
0,1 - < 1	5,5'-Dithiodi-1,3,4-thiadiazole-2(3H)-thione CAS: 72676-55-2, EINECS/ELINCS: 276-763-0 GHS/CLP: Skin Sens. 1: H317 - Aquatic Chronic 2: H411
0,1 - < 1	Hexanoic acid, 2-ethyl-, zinc salt, basic CAS: 85203-81-2, EINECS/ELINCS: 286-272-3, Reg-No.: 01-2119979093-30-XXXX GHS/CLP: Repr. 2: H361d - Eye Irrit. 2: H319 - Aquatic Chronic 3: H412
0,1 - < 1	Zinc naphthenate CAS: 84418-50-8, EINECS/ELINCS: 282-762-6, Reg-No.: 01-2119988500-34-XXXX GHS/CLP: Skin Sens. 1: H317 - Aquatic Chronic 3: H412

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: 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

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

Seek medical advice immediately.
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.
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)

5.3 Advice for firefighters

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

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 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.

Do not eat, drink or smoke when using this product.
Use barrier skin cream.
Wash hands before breaks and after work.
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 food and animal food/diet.
Keep 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 (GB)

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

DNEL

Substance
Dilithium azelate, CAS: 38900-29-7
Industrial, dermal, Long-term - local effects, 172 µg/cm ² ,
general population, dermal, Acute - systemic effects, 23 µg/cm ² ,
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, 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,
Hexanoic acid, 2-ethyl-, zinc salt, basic, CAS: 85203-81-2
Industrial, dermal, Long-term - systemic effects, 6,41 mg/kg bw/d,
Industrial, inhalative, Long-term - systemic effects, 20.83 mg/m ³ ,
general population, inhalative, Long-term - systemic effects, 10,42 mg/m ³ ,
general population, oral, Long-term - systemic effects, 3,21 mg/kg bw/d,
general population, dermal, Long-term - systemic effects, 3,21 mg/kg bw/d,
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
Industrial, inhalative, Long-term - systemic effects, 5,8 mg/m ³ ,
Industrial, dermal, Long-term - systemic effects, 8,3 mg/kg,
general population, inhalative, Long-term - systemic effects, 1,74 mg/m ³ ,
general population, dermal, Long-term - systemic effects, 5 mg/kg,
Zinc naphthenate, CAS: 84418-50-8
Industrial, inhalative, Long-term - systemic effects, 4.93 mg/m ³ (AF= 12.5),
Industrial, dermal, Long-term - systemic effects, 1.4 mg/kg bw/d (AF= 50),
general population, oral, Long-term - systemic effects, 0.5 mg/kg bw/d (AF= 100),
general population, dermal, Long-term - systemic effects, 0.5 mg/kg bw/d (AF= 100),
general population, inhalative, Long-term - systemic effects, 0.87 mg/m ³ (AF= 25),

PNEC

Substance
Dilithium azelate, CAS: 38900-29-7
seawater, 2,3 µg/L,
freshwater, 23 µg/L,
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
sewage treatment plants (STP), 3.8 mg/L (AF= 100),
sediment (freshwater), 0.322 mg/kg dw,
sediment (seawater), 0.0322 mg/kg dw,

soil, 0.062 mg/kg dw,
seawater, 4.6 µg/L (AF= 10 000),
freshwater, 4 µg/L (AF= 100),
oral (food), 8.33 mg/kg food (AF=300),
Hexanoic acid, 2-ethyl-, zinc salt, basic, CAS: 85203-81-2
sediment (seawater), 0,637 mg/kg sediment dw,
sewage treatment plants (STP), 71,7 mg/L,
freshwater, 0,36 mg/L,
seawater, 0,036 mg/L,
sediment (seawater), 6,37 mg/kg sediment dw,
soil, 1,06 mg/kg,
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
oral (food), 16,7 mg/kg,
sediment (freshwater), 1,29 mg/kg,
freshwater, 0,004 mg/l,
seawater, 0,0004 mg/l,
sewage treatment plants (STP), 100 mg/l,
soil, 1,04 mg/kg,
Zinc naphthenate, CAS: 84418-50-8
soil, 35.6 mg/kg dw (AF= 1),
freshwater, 20.6 µg/L (AF= 1),
seawater, 6.1 µg/L (AF= 1),
sewage treatment plants (STP), 52 µg/L (AF= 100),
sediment (freshwater), 117.8 mg/kg dw (AF= 1),
sediment (seawater), 56.5 mg/kg dw (AF= 1),

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.
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. > 0,11 mm; Nitrile rubber, >480 min (EN 374-1/-2/-3).
Skin protection	Protective clothing (EN 340)
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. Avoid contact with eyes and skin.
Respiratory protection	Not required under normal conditions.
Thermal hazards	none
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	pasty
Color	light brown
Odor	characteristic
Odour threshold	not applicable
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	No information available.
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not applicable
Density [g/ml]	1,15 (DIN 51757) (25°C / 77,0°F)
Bulk density [kg/m ³]	not applicable
Solubility in water	immiscible
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	No information available.
Kinematic viscosity	NGLI 2
Relative vapour density	No information available.
Evaporation speed	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature [°C]	No information available.
Particle characteristics	No information available.

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

Strong heating.

10.5 Incompatible materials

Oxidizing agent
Acids



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10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

Product
ATE-mix, oral, > 2000 mg/kg bw,
Substance
Dilithium azelate, CAS: 38900-29-7
LD50, oral, Rat, 300 mg/kg bw,
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
LD50, oral, Rat, 3100 mg/kg bw,
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
LD50, oral, Rat, > 5000 mg/kg bw (OECD 401),
NOEL, oral, Rat, 25 mg/kg/28d,
Zinc naphthenate, CAS: 84418-50-8
LD50, oral, Rat, > 2000 mg/kg bw,

Acute dermal toxicity

Product
dermal, Based on the available information, the classification criteria are not fulfilled.,
Substance
Dilithium azelate, CAS: 38900-29-7
LD50, dermal, Rat, 2000 mg/kg bw,
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
LD50, dermal, Rabbit, 5000 mg/kg bw,
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
LD50, dermal, Rat, > 5000 mg/kg bw (OECD 402),
Zinc naphthenate, CAS: 84418-50-8
LD50, dermal, Rat, > 2000 mg/kg bw,

Acute inhalational toxicity

Product
inhalative, Based on the available information, the classification criteria are not fulfilled.,
Substance
Zinc naphthenate, CAS: 84418-50-8
LC50, inhalative, Rat, > 0.42 mg/l/4h,

Serious eye damage/irritation	CAS 4259-15-8 (< 50%) Slight irritant effect - does not require labelling. Based on the available information, the classification criteria are not fulfilled.
Skin corrosion/irritation	Based on the available information, the classification criteria are not fulfilled.
Respiratory or skin sensitisation	Toxicological data of complete product are not available. May produce an allergic reaction. Calculation method
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
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
NOAEL, oral, Rat, 125 mg/kg bw/day,
Zinc naphthenate, CAS: 84418-50-8
NOAEL, oral, Rat, 50 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. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 12: Ecological information

12.1 Toxicity

Substance
Dilithium azelate, CAS: 38900-29-7
LC50, (96h), fish, 100 mg/L,
EC50, (72h), Algae, 23 mg/L,
EC50, (48h), Crustacea, 100 mg/L,
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
EL50, (48h), Daphnia magna, 75 mg/l (OECD 202),
NOEC, (21d), Daphnia magna, 0,4 mg/l (OECD 211),
LL50, (96h), Rainbow trout, 4,4 mg/l (OECD 203),
ErL50, (72h), Scenedesmus subspicatus, 410 mg/l (OECD 201),
EbL50, (72h), Scenedesmus subspicatus, 240 mg/l (OECD 201),
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,
Zinc naphthenate, CAS: 84418-50-8
LC50, (4d), fish, 112 - 5620 µg/L,
EC50, (4d), Algae, 18.1 - 80.5 mg/L,
EC50, (48h), Invertebrates, 155 - 20 000 µg/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 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

Ecological data of complete product are not available.

Do not discharge product unmonitored into the environment.

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!

Coordinate disposal with the disposal contractor/authorities if necessary.

Waste no. (recommended)

1201

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
150102
150104

SECTION 14: Transport information

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

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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 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

EEC-REGULATIONS	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
TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2021)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011).
- Observe employment restrictions for people	no
- VOC (2010/75/CE)	0 %

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H319 Causes serious eye irritation.
H361d Suspected of damaging the unborn child.

H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
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

none