

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

febi 32931 Engine Oil 10W - 40
Article number: 32931, 32932, 32933, 32934, 32935

1.2 Relevant identified uses of the substance or mixture and uses advised against**1.2.1 Relevant uses**

Engine oil

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)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]**

Eye Irrit. 2: H319 Causes serious eye irritation.
 Skin Sens. 1: H317 May cause an allergic skin reaction.
 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**Signal word**

WARNING

Contains:

Calcium long chain alkyl aryl sulfonate
 Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts

Hazard statements

H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P280 Wear protective gloves / eye protection / face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333+P313 If skin irritation or rash occurs: Get medical advice / attention.
 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.

Ferdinand Bilstein GmbH + Co. KG

Date printed 28.05.2018, Revision 28.05.2018

Version 06. Supersedes version: 05

Page 2 / 13

2.3 Other hazards

| | |
|------------------------------|--|
| 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 - < 5 | Polyolefine polyamine succinimide, polyol |
| | CAS: 147880-09-9, EINECS/ELINCS: Polymer |
| | GHS/CLP: Aquatic Chronic 4: H413 |
| 1 - < 2 | Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts |
| | CAS: 68784-31-6, EINECS/ELINCS: 272-238-5, Reg-No.: 01-2119657973-23-XXXX |
| | GHS/CLP: Eye Dam. 1: H318 - Aquatic Chronic 2: H411 |
| 1 - < 2 | Phenol, dodecyl-, sulfurized, carbonates, calcium salts, overbased containing Distillates (petroleum), hydrotreated heavy paraffinic (UVCB) |
| | CAS: 68784-26-9 |
| | GHS/CLP: Aquatic Chronic 4: H413, M = 1 |
| 1 - < 2 | Bis(nonylphenyl)amine |
| | CAS: 36878-20-3, EINECS/ELINCS: 253-249-4, Reg-No.: 01-2119488911-28-XXXX |
| | GHS/CLP: Aquatic Chronic 4: H413 |
| 1 - < 2 | Calcium long chain alkyl aryl sulfonate |
| | CAS: 722503-68-6 |
| | GHS/CLP: Skin Sens. 1: H317 - Aquatic Chronic 4: H413 |
| < 1 | Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts |
| | CAS: 68584-23-6, EINECS/ELINCS: 271-529-4 |
| | GHS/CLP: Skin Sens. 1B: H317 |
| < 0,25 | Phenol, dodecyl-, branched |
| | CAS: 121158-58-5, EINECS/ELINCS: 310-154-3, EU-INDEX: 604-092-00-9, Reg-No.: 01-2119513207-49-XXXX |
| | GHS/CLP: Skin Corr. 1C: H314 - Repr. 1B: H360 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410 - Eye Dam. 1: H318, M = 10 |

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 | 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 | Consult a doctor immediately. Do not induce vomiting. 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

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

Not combusted hydrocarbons.
Risk of formation of toxic pyrolysis products.
Carbon monoxide (CO)

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.

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

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. general-purpose 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

Avoid formation of aerosols.
Do not smoke.
Fire class (DIN EN 2): B
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.
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

Keep only in original container.
Prevent penetration into the ground.
Do not store together with oxidizing agents.
Keep container tightly closed.
Keep container in a well-ventilated place.



Ferdinand Bilstein GmbH + Co. KG

Date printed 28.05.2018, Revision 28.05.2018

Version 06. Supersedes version: 05

Page 4 / 13

7.3 Specific end use(s)

See product use, SECTION 1.2

Ferdinand Bilstein GmbH + Co. KG

Date printed 28.05.2018, Revision 28.05.2018

Version 06. Supersedes version: 05

Page 5 / 13

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

not applicable

DNEL

| |
|---|
| Substance |
| Phenol, dodecyl-, branched, CAS: 121158-58-5 |
| Industrial, dermal, Acute - systemic effects: 166 mg/kg bw. |
| Industrial, dermal, Long-term - systemic effects: 0,25 mg/kg bw. |
| Industrial, inhalative (mist), Acute - systemic effects: 44,18 mg/m ³ . |
| general population, oral, Long-term - systemic effects: 0,075 mg/kg bw. |
| general population, dermal, Acute - systemic effects: 50 mg/kg bw. |
| general population, dermal, Long-term - systemic effects: 0,075 mg/kg bw. |
| general population, inhalative (mist), Acute - systemic effects: 13,26 mg/m ³ . |
| general population, inhalative (mist), Long-term - systemic effects: 0,79 mg/m ³ . |
| Bis(nonylphenyl)amine, CAS: 36878-20-3 |
| Industrial, dermal, Long-term - systemic effects: 5 mg/kg bw/day. |
| general population, dermal, Long-term - systemic effects: 2,5 mg/kg bw/day. |
| general population, oral, Long-term - systemic effects: 0,25 mg/kg bw/day. |
| Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts, CAS: 68784-31-6 |
| Industrial, dermal, Acute - systemic effects: 100 mg/kg bw/d. |
| Industrial, inhalative, Long-term - systemic effects: 2,93 mg/m ³ . |
| Industrial, dermal, Long-term - systemic effects: 10,42 mg/kg bw/d. |
| Industrial, inhalative, Acute - systemic effects: 496,4 mg/m ³ . |
| general population, inhalative, Acute - systemic effects: 11,75 mg/m ³ . |
| general population, inhalative, Acute - systemic effects: 198,6 mg/m ³ . |
| general population, dermal, Long-term - systemic effects: 2,1 mg/kg bw/d. |
| general population, dermal, Acute - systemic effects: 50 mg/kg bw/d. |
| general population, oral, Long-term - systemic effects: 0,21 mg/kg bw/d. |
| general population, oral, Acute - systemic effects: 29 mg/kg bw/d. |
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts, CAS: 68584-23-6 |
| Industrial, inhalative, Long-term - systemic effects: 11,75 mg/m ³ . |
| Industrial, dermal, Long-term - systemic effects: 3,33 mg/kg bw/day. |
| Industrial, dermal, Long-term - local effects: 1,03 mg/cm ² . |
| general population, oral, Long-term - systemic effects: 0,833 mg/kg bw/day. |
| general population, inhalative, Long-term - systemic effects: 2,9 mg/m ³ . |
| general population, dermal, Long-term - systemic effects: 1,667 mg/kg bw/day. |
| general population, dermal, Long-term - local effects: 0,513 mg/cm ² . |

PNEC

| |
|--|
| Substance |
| Phenol, dodecyl-, branched, CAS: 121158-58-5 |
| oral (food), 4 mg/kg. |
| soil, 0,188 mg/kg. |
| seawater, 0,0000074 mg/l. |
| sediment (seawater), 0,0226 mg/kg. |
| sediment (freshwater), 0,226 mg/kg. |



Ferdinand Bilstein GmbH + Co. KG

Date printed 28.05.2018, Revision 28.05.2018

Version 06. Supersedes version: 05

Page 6 / 13

| |
|---|
| freshwater, 0,000074 mg/l. |
| Bis(nonylphenyl)amine, CAS: 36878-20-3 |
| seawater, 0,01 mg/l. |
| freshwater, 0,1 mg/l. |
| sewage treatment plants (STP), 1 mg/l. |
| sediment (freshwater), 132000 mg/kg. |
| soil, 263000 mg/kg. |
| sediment (seaater), 13200 mg/kg. |
| Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts, CAS: 68784-31-6 |
| oral (food), 8,33 mg/kg. |
| sediment (freshwater), 0,0701 mg/l. |
| sediment (seaater), 0,00701 mg/l. |
| freshwater, 0,0040 mg/l. |
| soil, 0,0548 mg/kg. |
| sewage treatment plants (STP), 3,8 mg/l. |
| seawater, 0,0046 mg/l. |
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts, CAS: 68584-23-6 |
| sewage treatment plants (STP), 1000 mg/l. |
| freshwater, 1 mg/l. |
| oral (food), 16,667 mg/kg food. |
| seawater, 1 mg/l. |

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 | If there is a risk of splashing: safety glasses |
| Hand protection | The details concerned are recommendations. Please contact the glove supplier for further information. > 0,4 mm; Nitrile rubber, >480 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. 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 | none |
| Delimitation and monitoring of the environmental exposition | Comply with applicable environmental regulations limiting discharge to air, water and soil. |

Ferdinand Bilstein GmbH + Co. KG

Date printed 28.05.2018, Revision 28.05.2018

Version 06. Supersedes version: 05

Page 7 / 13

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

| | |
|---|--|
| Form | liquid |
| Color | yellow-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] | > 200 (ISO 2592) |
| 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] | < 0,01 (20°C) |
| Density [g/ml] | 0,87 (DIN 51757) (15 °C / 59,0 °F) |
| Bulk density [kg/m ³] | not applicable |
| Solubility in water | immiscible |
| Partition coefficient [n-octanol/water] | No information available. |
| Viscosity | > 20,5 mm ² /s (40° C) ~ 13,5 - 15,5 mm ² /s (100°C) (DIN 51562/T1) |
| Relative vapour density determined in air | No information available. |
| Evaporation speed | No information available. |
| Melting point [°C] | ~ -27 (ISO 3016) |
| Autoignition temperature [°C] | No information available. |
| Decomposition temperature [°C] | 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 strong oxidizing agents.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Oxidizing agent

10.6 Hazardous decomposition productsIn the case of heating following (decomposition) products may occur:
> 65°C / Hydrogen sulfide (H₂S).

Ferdinand Bilstein GmbH + Co. KG

Date printed 28.05.2018, Revision 28.05.2018

Version 06. Supersedes version: 05

Page 8 / 13

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| |
|---|
| Product |
| inhalative, Based on the available information, the classification criteria are not fulfilled.: |
| dermal, Based on the available information, the classification criteria are not fulfilled.: |
| ATE-mix, oral, > 2000 mg/kg bw. |
| Substance |
| Phenol, dodecyl-, branched, CAS: 121158-58-5 |
| LD50, dermal, Rabbit: 15000 mg/kg bw. |
| LD50, oral, Rat: 2100 mg/kg bw. |
| Bis(nonylphenyl)amine, CAS: 36878-20-3 |
| LD50, dermal, Rat: >2000 mg/kg (OECD 402). |
| LD50, oral, Rat: >5000 mg/kg (OECD 401). |
| Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts, CAS: 68784-31-6 |
| LD50, dermal, Rabbit: >5000 mg/kg bw. |
| LD50, oral, Rat: 2750 mg/kg bw. |
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts, CAS: 68584-23-6 |
| LD50, dermal, Rabbit: >5000 mg/kg bw. |
| LD50, oral, Rat: >5000 mg/kg bw. |
| LC50, inhalative, Rat: >1,9 mg/l. |

| | |
|---|---|
| Serious eye damage/irritation | Toxicological data of complete product are not available. Irritant Calculation method |
| 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 cause an allergic skin 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. |
| 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. On basis of test data |
| General remarks | Frequent persistent contact with the skin can cause skin irritation. 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. |

Ferdinand Bilstein GmbH + Co. KG

Date printed 28.05.2018, Revision 28.05.2018

Version 06. Supersedes version: 05

Page 9 / 13

SECTION 12: Ecological information

12.1 Toxicity

| |
|---|
| Product |
| Based on the available information, the classification criteria are not fulfilled.: |
| Substance |
| Phenol, dodecyl-, branched, CAS: 121158-58-5 |
| EC50, (72h), Scenedesmus subspicatus: 0,15 mg/l. |
| EC50, (21d), Daphnia magna: 0,008 mg/l. |
| EC50, (48h), Daphnia magna: 0,037 mg/l. |
| EL50, (96h), Pimephales promelas: 40 mg/l. |
| Bis(nonylphenyl)amine, CAS: 36878-20-3 |
| EC50, (48h), Daphnia magna: >100 mg/l (OECD 202). |
| LC0, (96h), Brachidanio rerio: 58 mg/l (OECD 203). |
| Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts, CAS: 68784-31-6 |
| EC50, (16h), Pseudomonas putida: 380 mg/l. |
| IC50, (21d), Daphnia magna: >0,8 mg/l. |
| EL50, (48h), Daphnia magna: 75 mg/l. |
| EL50, (72h), Desmodesmus subspicatus: 410 mg/l. |
| NOEC, (21d), Daphnia magna: 0,8 mg/l. |
| NOELR, (96h), Oncorhynchus mykiss: 3,2 mg/l. |
| NOELR, (48h), Daphnia magna: 32 mg/l. |
| LL50, (96h), Oncorhynchus mykiss: 4,4 mg/l. |
| EC0, (16h), Pseudomonas putida: 200 mg/l. |
| LOEC, (21d), Daphnia magna: 0,8 mg/l. |
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts, CAS: 68584-23-6 |
| EC50, (48h), Daphnia magna: >1000 mg/l. |
| EC50, (72h), Pseudokirchneriella subcapitata: >1000 mg/l. |
| NOEC, (72h), Pseudokirchneriella subcapitata: 1000 mg/l. |
| LL50, (96h), fish: >10000 mg/l. |
| EC0, (48h), Daphnia magna: 1000 mg/l. |
| LL0, (96h), fish: 10000 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.



Ferdinand Bilstein GmbH + Co. KG

Date printed 28.05.2018, Revision 28.05.2018

Version 06. Supersedes version: 05

Page 10 / 13

12.6 Other adverse effects

Ecological data of complete product are not available.

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.
Dispose of as hazardous waste.

Waste no. (recommended)

130205* mineral-based non-chlorinated engine, gear and lubricating oils

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*

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

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"



Ferdinand Bilstein GmbH + Co. KG

Date printed 28.05.2018, Revision 28.05.2018

Version 06. Supersedes version: 05

Page 11 / 13

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 1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2008/47/EC); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014

TRANSPORT-REGULATIONS DOT-Classification, ADR (2017); IMDG-Code (2017, 38. Amdt.); IATA-DGR (2018).

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 03)**

H411 Toxic to aquatic life with long lasting effects.
 H318 Causes serious eye damage.
 H317 May cause an allergic skin reaction.
 H410 Very toxic to aquatic life with long lasting effects.
 H400 Very toxic to aquatic life.
 H360 May damage fertility or the unborn child.
 H314 Causes severe skin burns and eye damage.
 H413 May cause long lasting harmful effects to aquatic life.

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
 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
 LC0 = lethal concentration, 0%
 LOAEL = lowest-observed-adverse-effect level
 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**

Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
 Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
 Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects. (Calculation method)



Ferdinand Bilstein GmbH + Co. KG

Date printed 28.05.2018, Revision 28.05.2018

Version 06. Supersedes version: 05

Page 13 / 13

Modified position

SECTION 3 been added: Phenol, dodecyl-, branched

SECTION 3 been added: Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts

SECTION 3 been added: Phenol, dodecyl-, sulfurized, carbonates, calcium salts, overbased containing Distillates (petroleum), hydrotreated heavy paraffinic (UVCB)

SECTION 3 been added: Bis(nonylphenyl)amine

SECTION 3 been added: Calcium long chain alkyl aryl sulfonate

SECTION 15 deleted: EUH210 Safety data sheet available on request.

SECTION 2 been added: H412 Harmful to aquatic life with long lasting effects.

SECTION 2 been added: Aquatic Chronic 3

SECTION 2 been added: H317 May cause an allergic skin reaction.

SECTION 2 been added: Skin Sens. 1

SECTION 2 been added: H319 Causes serious eye irritation.

SECTION 2 been added: Eye Irrit. 2