

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

### 1.1 Product identifier

**Gear oil DCTF-P**  
**Article number: 194700**

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

#### 1.2.1 Relevant uses

Gearbox oil

#### 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

Acute Tox. 4: H332 Harmful if inhaled.  
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects.  
Repr. 2: H361f Suspected of damaging fertility.

### 2.2 Label elements

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

#### Hazard pictograms



#### Signal word

WARNING

#### Contains:

1-Decene, Dimer, hydrogenated, CAS: 68649-11-6

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene, CAS: 68411-46-1

#### Hazard statements

H332 Harmful if inhaled.  
H412 Harmful to aquatic life with long lasting effects.  
H361f Suspected of damaging fertility.

#### Precautionary statements

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P273 Avoid release to the environment.  
P308+P311 IF exposed or concerned: Call a POISON CENTER/ doctor.  
P405 Store locked up.  
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.

## 2.3 Other hazards

Physico-chemical hazards	Combustible.
Environmental hazards	Does not contain any PBT or vPvB substances.
Other hazards	Further hazards were not determined with the current level of knowledge. This product is classified as 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
20 - < 50	1-Decene, Dimer, hydrogenated CAS: 68649-11-6
20 - < 50	Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract) CAS: 64742-54-7
0,1 - < 1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS: 68411-46-1
0,1 - < 0,25	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol CAS: 1218787-32-6
0,001 - < 0,1	3-((C9-11-iso,C10-rich)alkyloxy)propan-1-amine

Comment on component parts 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	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.  
If swallowed or in the event of vomiting, risk of product entering the lungs.  
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

Risk of formation of toxic pyrolysis products.

## 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 within the local regulations.

## 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 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 aerosols.

Use only in well-ventilated areas.

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.

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 food and animal food/diet.

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
Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract)
CAS: 64742-54-7
Long-term exposure: 5 mg/m <sup>3</sup> , OSHA, oil mist
1-Decene, Dimer, hydrogenated
CAS: 68649-11-6
Long-term exposure: 5 mg/m <sup>3</sup> , oil mist (TWA)

#### DNEL

Substance
Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract), CAS: 64742-54-7
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, oral, Long-term - systemic effects, 740 µg/kg bw/day
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
Industrial, inhalative, Acute - systemic effects, 60 mg/m <sup>3</sup>
60 mg/m <sup>3</sup>
general population, inhalative, Acute - systemic effects, 50 mg/m <sup>3</sup>
60 mg/m <sup>3</sup>
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol, CAS: 1218787-32-6
Industrial, inhalative, Long-term - systemic effects, 2.96 mg/m <sup>3</sup>
Industrial, dermal, Long-term - systemic effects, 420 µg/kg bw/day
general population, inhalative, Long-term - systemic effects, 522 µg/m <sup>3</sup>
general population, dermal, Long-term - systemic effects, 150 µg/kg bw/day
general population, oral, Long-term - systemic effects, 150 µg/kg bw/day
3-((C9-11-iso,C10-rich)alkyloxy)propan-1-amine
Industrial, inhalative, Long-term - systemic effects, 4.9 mg/m <sup>3</sup> (AF= 25)
Industrial, dermal, Long-term - systemic effects, 0.7 mg/kg bw/d (AF= 100)
general population, inhalative, Long-term - systemic effects, 0.74 mg/m <sup>3</sup> (AF= 50)
general population, dermal, Long-term - systemic effects, 250 µg/kg bw/day
general population, oral, Long-term - systemic effects, 250 µg/kg bw/day
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene, CAS: 68411-46-1
Industrial, inhalative, Long-term - systemic effects, 0,31 mg/m <sup>3</sup>
Industrial, dermal, Long-term - systemic effects, 0,44 mg/kg bw/day
general population, inhalative, Long-term - systemic effects, 0,08 mg/m <sup>3</sup>
general population, dermal, Long-term - systemic effects, 0,22 mg/kg bw/day
general population, oral, Long-term - systemic effects, 0,05 mg/kg bw/day

#### PNEC

Substance
Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract), CAS: 64742-54-7
oral (food), 9,33 mg/kg
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
There are no PNEC values established for the substance.

2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol, CAS: 1218787-32-6
freshwater, 0.214 µg/L
seawater, 0.021 µg/L
sewage treatment plants (STP), 1500 µg/L
sediment (freshwater), 1.692 mg/kg sediment dw
sediment (seawater), 0.169 mg/kg sediment dw
soil, 5 mg/kg soil dw
oral (food), 2 mg/kg food
3-((C9-11-iso,C10-rich)alkyloxy)propan-1-amine
freshwater, 0.84 µg/L (AF= 50)
seawater, 0.084 µg/L (AF= 500)
sewage treatment plants (STP), 1.3 mg/L (AF= 10)
sediment (freshwater), 3.19 mg/kg dw (AF= 1)
sediment (seawater), 0.32 mg/kg dw (AF= 10)
soil, 1.59 mg/kg dw (AF= 1)
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene, CAS: 68411-46-1
freshwater, 0,034 mg/L
seawater, 0,003 mg/L
sewage treatment plants (STP), 10 mg/L
sediment (freshwater), 0,446 mg/kg sediment dw
sediment (seawater), 0,045 mg/kg sediment dw
soil, 17,6 mg/kg soil dw
oral (food), 0,833 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. > 0,4mm: 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. 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-P2.
<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	amber colour
Odor	characteristic
Odor threshold	No information available.
pH-value	Not applicable
pH-value [1%]	Not applicable
Boiling point or initial boiling point and boiling range [°C]	Not applicable
Flash point [°C]	185
Flammability	Not explosive.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Oxidizing properties	No
Vapor pressure/gas pressure [kPa]	Not determined
Density [g/cm <sup>3</sup> ]	0.82 (15 °C / 59,0 °F)
Relative density	Not determined
Bulk density [kg/m <sup>3</sup> ]	Not applicable
Solubility in water	virtually insoluble
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	No information available.
Kinematic viscosity	26,5 mm <sup>2</sup> /s 40°C
Relative vapour density	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature [°C]	Not applicable
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

The product is stable under standard conditions.

### 10.3 Possibility of hazardous reactions

No hazardous reactions known.

### 10.4 Conditions to avoid

No special measures necessary.

## **10.5 Incompatible materials**

Strong oxidizing agent.  
strong acids

## **10.6 Hazardous decomposition products**

No hazardous decomposition products known.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute oral toxicity

Substance
Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract), CAS: 64742-54-7
LD50, oral, Rat, 5000 mg/kg bw
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
LD50, oral, Rat, 2000 - 5000 mg/kg bw
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol, CAS: 1218787-32-6
LD50, oral, Rat, 1200 - 2000 mg/kg bw
NOEL, oral, Rat, 5 mg/kg bw/day
3-((C9-11-iso,C10-rich)alkyloxy)propan-1-amine
LD50, oral, Rat, 200 - 2000 mg/kg bw
NOAEL, oral, Rat, 50 mg/kg bw/day
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene, CAS: 68411-46-1
LC50, oral, Rat, > 5000 mg/kg, OECD 401

#### Acute dermal toxicity

Substance
Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract), CAS: 64742-54-7
LD50, dermal, Rabbit, 2000 - 5 00 mg/kg bw
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
LD50, dermal, Rat, 2000 mg/kg bw
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol, CAS: 1218787-32-6
No information available.
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene, CAS: 68411-46-1
LD50, dermal, Rat, > 2000 mg/kg, OECD 402

#### Acute inhalational toxicity

Substance
Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract), CAS: 64742-54-7
LC50, inhalative, Rat, 2.18 - 5.53 mg/L air, 4h
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
LC50, inhalative, Rat, 900 - 5200 mg/m³ air, 4h
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol, CAS: 1218787-32-6
No information available.

#### Serious eye damage/irritation

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

Substance
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene, CAS: 68411-46-1
Eye, OECD 405, non-irritating

#### Skin corrosion/irritation

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

Substance
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene, CAS: 68411-46-1
dermal, non-irritating



**Respiratory or skin sensitisation** Based on the information available, the classification criteria have not been fulfilled.

Substance
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
dermal, Guinea pig, OECD 406, non-sensitizing
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene, CAS: 68411-46-1
dermal, Guinea pig, OECD 406, non-sensitizing

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

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

Substance
Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract), CAS: 64742-54-7
NOAEL, dermal, Rat, 30 - 2000 mg/kg bw/day
NOAEL, dermal, Rabbit, 1000 mg/kg bw/day
NOAEC, inhalative, Rat, 980 mg/m <sup>3</sup> air
LOAEL, oral, Rat, 125 mg/kg bw/day
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
NOAEL, oral, Rat, 1000 - 6771 mg/kg bw/day
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol, CAS: 1218787-32-6
NOAEL, oral, dogs, 13 mg/kg bw/day

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

Substance
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
no adverse effect observed
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene, CAS: 68411-46-1
in vitro, negativ

**Reproduction toxicity** Toxicological data of complete product are not available.  
Suspected of damaging fertility.  
Calculation method

**- Fertility**

Substance
Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract), CAS: 64742-54-7
NOAEL, oral, Rat, 1000 mg/kg bw/d (Effect on fertility), no adverse effect observed
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene, CAS: 68411-46-1
NOAEL, oral, Rat, 54 mg/kg bw/day, adverse effect observed

**- Development**

Substance
Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract), CAS: 64742-54-7
NOAEL, oral, Rat, 1000 mg/kg bw/d (Effect on fertility), no adverse effect observed

**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. The

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

## SECTION 12: Ecological information

### 12.1 Toxicity

Substance
Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract), CAS: 64742-54-7
EL50, (48h), Invertebrates, 10 g/L
NOELR, (14d), fish, 1 mg/L
LL50, (96h), Invertebrates, 10 g/L
LL50, (96h), fish, 100 mg/L
1-Decene, Dimer, hydrogenated, CAS: 68649-11-6
No information available.
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol, CAS: 1218787-32-6
LC50, (24h), Danio rerio, >0.29 mg/L (OECD 203)
EC50, (24h), Daphnia magna, 0.21 mg/L (OECD 202)
EC10, (21d), Daphnia magna, 10.7 µg/L (OECD 211)
EC10, (72h), Daphnia magna, 34.1 µg/L (OECD 201)
3-((C9-11-iso,C10-rich)alkyloxy)propan-1-amine
LC50, (96h), fish, 2.14 mg/L
EC50, (72h), Algae, 82.7 - 86.8 µg/L
EC10, (21d), Invertebrates, 1.22 - 1.28 mg/L
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene, CAS: 68411-46-1
LC50, (96h), fish, > 100 mg/kg (OECD 203)
EC50, (72h), Algae, > 100 mg/kg (OECD 201)
EC50, (48h), Daphnia magna, 51 mg/kg (OECD 202)

### 12.2 Persistence and degradability

Does not contain any relevant substances fulfilling the classification criteria.

Behaviour in environment  
compartments

Behaviour in sewage plant

Biological degradability

### 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

Contains no ingredients with endocrine-disrupting properties.

### 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.

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



**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product**

Disposal in an incineration plant in accordance with the regulations of the local authorities.  
In according to RoHS!

**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

**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.
- CA Proposition 65	No components require labeling under California Proposition 65. No chemical substances in this material are named on the California P65 list.
- TSCA	All chemical substances in this material are included on or exempted from listing on the TSCA Inventory.
- FDA	No information available.
American Conference of Governmental Industrial Hygienists - ACGIH	No information available.
International Agency for Research on Cancer IARC	No information available.
National Toxicology Program - NTP HAP-VOC	No information available.
Transport-regulations	DOT-Classification, ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2024)

**15.2 Chemical safety assessment**

For this product a chemical safety assessment has not been 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



**Ferdinand Bilstein GmbH + Co. KG**

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Version 1.0

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**NFPA Ratings**



TOP, FLAMMABILITY: 1 - Slight Hazard  
LEFT, HEALTH: 2\* - Moderate chronic Hazard  
RIGHT, REACTIVITY: 1 - Slight Hazard  
BOTTOM, SPECIAL NOTICE: -

**HMIS Ratings**

HEALTH	2*
FLAMMABILITY	1
PHYSICAL HAZARD	1
PERSONAL PROTECTION	X

2\* - Moderate chronic 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**

None