

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

1.1 Product identifier

Gear oil EDF-2
Article number: 184251

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
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

Skin Sens. 1A: H317 May cause an allergic skin reaction.

2.2 Label elements

The product is classified as hazardous in accordance to OSHA Standard 29 CFR 1910.1200 (HCS 2024)

Hazard pictograms



Signal word

WARNING

Contains:

1,1'-[iminobis(ethyleneiminoethylene)]bis[3-(octadecenyl)pyrrolidine-2,5-dione], CAS: 64051-50-9

Maleic anhydride, CAS: 108-31-6

Hazard statements

H317 May cause an allergic skin reaction.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P261 Avoid breathing mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P501 Dispose of contents/container to in accordance with local/regional/national/international regulation.

2.3 Other hazards

Physico-chemical hazards

No particular hazards known.

Human health dangers

Contains no ingredients with endocrine-disrupting properties ($\geq 0,1\%$).

Environmental hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Contains no ingredients with endocrine-disrupting properties.

Other hazards

No particular hazards known.

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	Distillates (petroleum), hydrotreated light paraffinic CAS: 64742-55-8
20 - < 50	Distillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract) CAS: 64742-54-7
1 - < 10	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract) CAS: 72623-86-0
0,1 - < 1	1,1'-[iminobis(ethyleneiminoethylene)]bis[3-(octadecenyl)pyrrolidine-2,5-dione] CAS: 64051-50-9
0,25 - < 1	Alkyl thiophosphites
0,01 - < 0,1	2,2'-(octadec-9-enylimino)bisethanol CAS: 25307-17-9
0,001 - < 0,1	Maleic anhydride CAS: 108-31-6

Comment on component parts

For full text of H-statements: see SECTION 16.
Contains less than 3% w/w DMSO-extract (only for mineral oils)

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

In case of contact with skin wash off immediately with plenty of 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

Allergic reactions

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

Risk of formation of toxic pyrolysis products.
Carbon monoxide (CO)
Sulphur oxides (SOx).
Nitrogen oxides (NOx).

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. oil 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

No special measures necessary if used correctly.

Use only in well-ventilated areas.

Use solvent-resistant equipment.

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.

Take off contaminated clothing and wash before reuse.

Contaminated work clothing should not be allowed out of the workplace.

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.

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 ³ , OSHA, oil mist
Distillates (petroleum), hydrotreated light paraffinic
CAS: 64742-55-8
Long-term exposure: 5 mg/m ³ , Oil mist, mineral
Maleic anhydride
CAS: 108-31-6
Long-term exposure: 0.25 ppm, 1 mg/m ³

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 ³
Industrial, inhalative, Long-term - local effects, 5.58 mg/m ³
Industrial, dermal, Long-term - systemic effects, 970 µg/kg bw/day
general population, inhalative, Long-term - local effects, 1.19 mg/m ³
general population, oral, Long-term - systemic effects, 740 µg/kg bw/day
Alkyl thiophosphites
Industrial, inhalative, Long-term - systemic effects, 1,76 mg/m ³
Industrial, dermal, Long-term - systemic effects, 0,5 mg/kg bw/day
general population, inhalative, Long-term - systemic effects, 0,43 mg/m ³
general population, dermal, Long-term - systemic effects, 0,25 mg/kg bw/day
general population, oral, Long-term - systemic effects, 0,25 mg/kg bw/day
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract), CAS: 72623-86-0
Industrial, inhalative, Long-term - systemic effects, 2.73 mg/m ³
Industrial, inhalative, Long-term - local effects, 5.58 mg/m ³
Industrial, dermal, Long-term - systemic effects, 970 µg/kg bw/day
general population, inhalative, Long-term - local effects, 1.19 mg/m ³
general population, oral, Long-term - systemic effects, 740 µg/kg bw/day
Maleic anhydride, CAS: 108-31-6
Industrial, dermal, Long-term - systemic effects, 200 µg/kg bw/day
Industrial, dermal, Acute - systemic effects, 200 µg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 81 µg/m ³
Industrial, inhalative, Acute - systemic effects, 200 µg/m ³
Industrial, inhalative, Long-term - local effects, 81 µg/m ³
Industrial, inhalative, Acute - local effects, 200 µg/m ³
general population, inhalative, Long-term - systemic effects, 50 µg/m ³
general population, inhalative, Long-term - local effects, 80 µg/m ³
general population, dermal, Long-term - systemic effects, 100 µg/kg bw/day
general population, dermal, Acute - systemic effects, 100 µg/kg bw/day
general population, oral, Long-term - systemic effects, 60 µg/kg bw/day
general population, oral, Acute - systemic effects, 100 µg/kg bw/day
2,2'-(octadec-9-enylimino)bisethanol, CAS: 25307-17-9
Industrial, inhalative, Long-term - systemic effects, 2,96 mg/m ³
Industrial, dermal, Long-term - systemic effects, 0,42 mg/kg bw/day
general population, dermal, Long-term - systemic effects, 0,15 mg/kg bw/day
general population, oral, Long-term - systemic effects, 0,15 mg/kg bw/day



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general population, inhalative, Long-term - systemic effects, 0,522 mg/m ³
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
Industrial, inhalative, Long-term - systemic effects, 2,73 mg/m ³
Industrial, inhalative, Long-term - local effects, 5,58 mg/m ³
Industrial, dermal, Long-term - systemic effects, 0,97 mg/kg
general population, oral, Long-term - systemic effects, 0,74 mg/kg

PNEC

Substance
Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract), CAS: 64742-54-7
oral (food), 9,33 mg/kg
Alkyl thiophosphites
freshwater, 900 ng/l
seawater, 90 ng/l
sewage treatment plants (STP), 54 mg/l
sediment (freshwater), 0,073 mg/kg
sediment (seawater), 0,007 mg/kg
soil, 0,015 mg/kg
oral (food), 10 mg/kg
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract), CAS: 72623-86-0
oral (food), 9,33 mg/kg food
Maleic anhydride, CAS: 108-31-6
freshwater, 0,038 mg/L
seawater, 0,004 mg/L
sewage treatment plants (STP), 44,6 mg/L
sediment (freshwater), 0,296 mg/kg sediment dw
sediment (seawater), 0,03 mg/kg sediment dw
soil, 0,037 mg/kg soil dw
2,2'-(octadec-9-enylimino)bisethanol, CAS: 25307-17-9
freshwater, 0,16 µg/L
seawater, 0,016 µg/L
sewage treatment plants (STP), 1,5 mg/L
sediment (freshwater), 1,692 mg/kg
sediment (seawater), 0,169 mg/kg
soil, 5 mg/kg
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
oral (food), 9,33 mg/kg

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. General limit for oil mist should be noted. 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	Safety glasses. (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. Nitrile butyl rubber (NBR) > 0,38 mm.; (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. Do not inhale gases/vapors/aerosols. Avoid contact with eyes and skin.
Respiratory protection	Not applicable
Thermal hazards	No information available.
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	Liquid
Form	Liquid
Color	yellow
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]	No information available.
Flash point [°C]	190
Flammability	Not highly flammable.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidizing properties	No
Vapor pressure/gas pressure [kPa]	No information available.
Density [g/cm³]	0,85 (DIN 51757) (15 °C / 59,0 °F)
Relative density	Not determined
Bulk density [kg/m³]	Not applicable
Solubility in water	immiscible
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	No information available.
Kinematic viscosity	22,5 mm²/s (40°C) (DIN 51562)
Relative vapour density	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature [°C]	No information available.
Decomposition temperature [°C]	No information available.
Particle characteristics	Not applicable

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

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

No special measures necessary.

10.5 Incompatible materials

Strong oxidizing agent.
Strong basic compounds
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

Product
oral, 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
LD50, oral, Rat, > 5000 mg/kg bw
Alkyl thiophosphites
LD50, oral, Rat, > 2000 mg/kg
NOAEL, oral, Rat, 50 - 150 mg/kg bw/day
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract), CAS: 72623-86-0
LD50, oral, Rat, > 5000 mg/kg bw
Maleic anhydride, CAS: 108-31-6
LD50, oral, Rat, 1090 mg/kg bw
NOAEL, oral, Rat, 10 - 250 mg/kg bw/day
2,2'-(octadec-9-enylimino)bisethanol, CAS: 25307-17-9
LD50, oral, Rat, 1260 mg/kg
1,1'-[iminobis(ethyleneiminoethylene)]bis[3-(octadecenyl)pyrrolidine-2,5-dione], CAS: 64051-50-9
LD50, oral, Rat, 2000 mL/kg bw
NOAEL, oral, Rat, 1000 mg/kg bw
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
no adverse effect observed (by analogy with similar substances), (CAS 64742-56-9),
LC50, oral, Rat, > 5000 mg/kg, OECD 401

Acute dermal toxicity

Product
dermal, 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
LD50, dermal, Rabbit, > 5000 mg/kg bw
Alkyl thiophosphites
LD50, dermal, Rabbit, > 500 mg/kg
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract), CAS: 72623-86-0
LD50, dermal, Rabbit, > 5000 mg/kg bw
Maleic anhydride, CAS: 108-31-6
LD50, dermal, Rabbit, 2620 mg/kg bw
1,1'-[iminobis(ethyleneiminoethylene)]bis[3-(octadecenyl)pyrrolidine-2,5-dione], CAS: 64051-50-9
LD50, dermal, Rat, 2000 mg/kg bw
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
no adverse effect observed (by analogy with similar substances), (CAS 64742-56-9),
LD50, dermal, Rabbit, > 5000 mg/kg, OECD 402

Acute inhalational toxicity

Product
inhalative, 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



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LC50, inhalative, Rat, 2.18 - 5.53 mg/L air, 4h
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract), CAS: 72623-86-0
LC50, inhalative, Rat, 2.18 - 5.53 mg/L air, 4h
Maleic anhydride, CAS: 108-31-6
NOAEC, inhalative, Rat, 3.3 mg/m³ air
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
LC50, inhalativ (mist), Rat, > 5,53 mg/l, OECD 403, 4h

Serious eye damage/irritation Based on the information available, the classification criteria have not been fulfilled.

Substance
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract), CAS: 72623-86-0
Eye, non-irritating
Maleic anhydride, CAS: 108-31-6
Eye, Rabbit, OECD 405, Can cause irreversible damage to the eyes.
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
Rabbit (eye), OECD 405, non-irritating

Skin corrosion/irritation Based on the information available, the classification criteria have not been fulfilled.

Substance
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract), CAS: 72623-86-0
dermal, non-irritating
Maleic anhydride, CAS: 108-31-6
dermal, Rabbit, OECD 404, corrosive
2,2'-(octadec-9-enylimino)bisethanol, CAS: 25307-17-9
dermal, Rabbit, OECD 404, corrosive
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
Rabbit, in vivo, non-irritating

Respiratory or skin sensitisation May cause an allergic skin reaction.
Based on the information available, the classification criteria have been fulfilled.
Calculation method

Substance
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract), CAS: 72623-86-0
dermal, non-sensitizing
Maleic anhydride, CAS: 108-31-6
dermal, mouse, OECD 429, sensitising
inhalative, Rat, In vivo study, sensitising
2,2'-(octadec-9-enylimino)bisethanol, CAS: 25307-17-9
dermal, Guinea pig, OECD 406, non-sensitizing
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
dermal, Guinea pig, OECD 406, non-sensitizing

Specific target organ toxicity — single exposure Does not contain any relevant substances fulfilling the classification criteria.
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/m³ air
LOAEL, oral, Rat, 125 mg/kg bw/day

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract), CAS: 72623-86-0
NOAEC, inhalative, Rat, 980 mg/m ³ air
LOAEL, oral, Rat, 125 mg/kg bw/day
LOAEL, dermal, mouse, 100 mg/kg bw/day
Maleic anhydride, CAS: 108-31-6
NOAEL, oral, dogs, 60 mg/kg bw/day, OECD 409, no adverse effect observed
NOAEC, inhalative, Rat, 3,3 mg/m ³ , In vivo study, adverse effect observed
2,2'-(octadec-9-enylimino)bisethanol, CAS: 25307-17-9
NOAEL, oral, Rat, 30 mg/kg bw/day, OECD 408, adverse effect observed
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
no adverse effect observed (by analogy with similar substances), (CAS 64742-04-7),
NOAEL, dermal, Rat, >= 2000 mg/kg, OECD 411
NOAEL, inhalative, Rat, > 980 mg/m ³ , OECD 412
LOAEL, oral, Rat, 125 mg/kg, OECD 408

Mutagenicity

Does not contain any relevant substances fulfilling the classification criteria.
Based on the information available, the classification criteria have not been fulfilled.

Substance
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract), CAS: 72623-86-0
in vitro, negativ
Maleic anhydride, CAS: 108-31-6
in vitro, OECD 471, negativ
2,2'-(octadec-9-enylimino)bisethanol, CAS: 25307-17-9
in vitro, OECD 471, negativ
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
in vitro, OECD 471, negativ
in vivo, OECD 474, negativ

Reproduction toxicity

Does not contain any relevant substances fulfilling the classification criteria.
Based on the information available, the classification criteria have not been fulfilled.

- Fertility

Substance
Distillates (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
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract), CAS: 72623-86-0
NOAEL, oral, Rat, 1000 mg/kg bw/day
Maleic anhydride, CAS: 108-31-6
NOAEL, oral, Rat, 55 mg/kg bw/day, OECD 416, no adverse effect observed
2,2'-(octadec-9-enylimino)bisethanol, CAS: 25307-17-9
NOAEL, oral, Rat, 150 mg/kg bw/day, OECD 443, no adverse effect observed
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
NOAEL, Rat, (P, F1) : >= 1000 mg/kg, OECD 421

- Development

Substance
Maleic anhydride, CAS: 108-31-6
NOAEL, oral, Rat, 140 mg/kg bw/day, OECD 414, no adverse effect observed
2,2'-(octadec-9-enylimino)bisethanol, CAS: 25307-17-9
NOAEL, oral, Rat, 150 mg/kg bw/day, OECD 414, no adverse effect observed
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
NOAEL, Rat, 2000 mg/kg, OECD 414
LOAEL, Rat, 125 mg/kg, OECD 414

Carcinogenicity

Does not contain any relevant substances fulfilling the classification criteria.
Based on the information available, the classification criteria have not been fulfilled.

Substance
Maleic anhydride, CAS: 108-31-6
NOAEL, oral, Rat, 100 mg/kg bw/day, OECD 451, no adverse effect observed

Aspiration hazard

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

General remarks

Toxicological data of complete product are not available.

SECTION 12: Ecological information

12.1 Toxicity

No classification due to toxicological investigations.

Substance
Destillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract), CAS: 64742-54-7
EC50, (48h), > 10000 mg/l (Gammarus pulex), OECD 202
EC50, (72h), Algae, > 100 mg/l
NOEC, (72h), Pseudokirchneriella subcapitata, ≥ 100 mg/l, OECD 201
NOEC, (21d), Daphnia magna, 10 mg/l, OECD 211
LL50, (96h), Fish, > 100 mg/l, OECD 203
Alkyl thiophosphites
EL50, (72h), Selenastrum capricornutum, 0,31 mg/l
EL50, (48h), Daphnia magna, 0,09 mg/l
LL50, (21d), Daphnia magna, 0,22 mg/l
LL50, (24h), Oncorhynchus mykiss, 2 mg/l
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (containing < 3% DMSO-extract), CAS: 72623-86-0
NOELR, (14d), Fish, 1 g/L
LL50, (96h), Invertebrates, 10 g/L
LL50, (96h), Fish, 100 mg/L
Maleic anhydride, CAS: 108-31-6
LC50, (96h), Fish, 75 mg/L
EC50, (48h), Invertebrates, 42,81 - 330 mg/L
EC50, (72h), Algae, 74.35 - 150 mg/L
2,2'-(octadec-9-enylimino)bisethanol, CAS: 25307-17-9
LC50, (96h), Danio rerio, 0,1 mg/l
EC50, (48h), Daphnia magna, 0,043 mg/l
EC50, (72h), Pseudokirchneriella subcapitata, 53,8 µg/L
1,1'-[iminobis(ethyleneiminoethylene)]bis[3-(octadecenyl)pyrrolidine-2,5-dione], CAS: 64051-50-9
EC50, (48h), Fish, 73.4 mg/L
EC50, (72h), Algae, 48.9 - 100 mg/L
NOEC, (72h), Algae, 32 - 100 mg/L
NOEC, (48h), Fish, 46 mg/L
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
LC50, (96h), Pimephales promelas, > 100 mg/l, OECD 203
EL50, (48h), Daphnia magna, > 10 000 mg/l, OECD 202
NOELR, (14d), Oncorhynchus mykiss, ≥ 1000 mg/l
NOEL, (72h), Pseudokirchneriella subcapitata, ≥ 100 mg/l, OECD 201
NOEL, (21d), Daphnia magna, 10 mg/l, OECD 211
NOEL, (72h), Pseudokirchneriella subcapitata, ≥ 100 mg/l, OECD 201



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12.2 Persistence and degradability

Behaviour in environment compartments	Not determined
Behaviour in sewage plant	Not determined
Biological degradability	Not determined

Substance
Distillates (petroleum), hydrotreated heavy paraffinic (containing < 3% DMSO-extract), CAS: 64742-54-7
(28d), 31 %, OECD 301 F, The product is not readily biodegradable.
Maleic anhydride, CAS: 108-31-6
(28d), > 90 %, OECD 301 B, The product is readily biodegradable.
Distillates (petroleum), hydrotreated light paraffinic, CAS: 64742-55-8
(28d), 2 - 4 %, OECD 301 B
(28d), 31,13 %, OECD 301 F
The product is not readily biodegradable.

12.3 Bioaccumulative potential

No information available.

Substance
Maleic anhydride, CAS: 108-31-6
log Pow, -2,61

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

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

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

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

National regulations

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

This product is not classified as hazardous under SARA 311.

- SARA, 313

No information available.

- CA Proposition 65

No components require labeling under California Proposition 65.

- New Jersey RTKHSL

- 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 component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

International Agency for Research on Cancer IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

National Toxicology Program - NTP

No information available.

HAP-VOC

No information available.

Transport-regulations

DOT-Classification, ADR (2025); IMDG-Code (2025, 42. Amdt.); IATA-DGR (2025)

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

NFPA Ratings



TOP, FLAMMABILITY: 1 - Slight Hazard
LEFT, HEALTH: 2 - Moderate Hazard
RIGHT, REACTIVITY: 0 - Minimal Hazard
BOTTOM, SPECIAL NOTICE:

HMIS Ratings

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

2 - Moderate Hazard
1 - Slight Hazard
0 - Minimal 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

1.3, 2.3, 3.2, 8.1, 9.1, 11.1, 15.1, 16.2, 16.3