

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



ANDEROL 2046 HS

Version	Revision Date:	SDS Number:	Date of last issue: 15.11.2021
2.0	15.08.2024	000000054439	Date of first issue: 15.11.2021

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

1.1 Product identifier

Trade name : ANDEROL 2046 HS

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

Use of the Sub-stance/Mixture : Lubricant

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company: Manufacturer
Anderol Specialty Lubricants
Groot Egtenrayseweg 23
5928 PA Venlo
Netherlands

Telephone : +31-77 396 0340

Supplier
LANXESS Deutschland GmbH
Production, Technology, Safety & Environment
Leverkusen
Germany
51369

Prepared by : Production, Technology, Safety & Environment
+4922188852288

Further information for the material safety data sheet : in-
fosds@lanxess.com

1.4 Emergency telephone

CHEMTREC +44 20 3885 0382 (CCN1001748)

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SECTION 2: Hazards identification


2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 H332: Harmful if inhaled.
Long-term (chronic) aquatic hazard, Category 3 H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms : 

Signal Word : **Warning**

Hazard Statements : **H332** Harmful if inhaled.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
P261 Avoid breathing mist or vapors.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
Response:
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous ingredients which must be listed on the label:

Dec-1-ene, dimers, hydrogenated
Gas oils (petroleum), hydrodesulfurized

Additional Labeling

EUH208 Contains N-1-naphthylaniline, 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-. May produce an allergic reaction.

2.3 Other 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.

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Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Dec-1-ene, dimers, hydrogenated	68649-11-6 500-228-5 01-2119493069-28-xxxx	Asp. Tox. 1; H304 Acute Tox. 4; H332	>= 30 - < 50
Gas oils (petroleum), hydrodesulfurized	64742-79-6 265-182-8 649-222-00-5 01-2119471311-49-xxxx	Acute Tox. 4; H332 Skin Irrit. 2; H315 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 2.5 - < 10
N-1-naphthylaniline	90-30-2 201-983-0 01-2119488704-27-xxxx	Acute Tox. 4; H302 Skin Sens. 1B; H317 STOT RE 2; H373 (Blood, Kidney) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1 Acute toxicity estimate Acute oral toxicity: 1,625 mg/kg	>= 0.25 - < 1
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorous pentoxide, and salted by amines, C12-14- tert	Not Assigned 931-384-6 01-2119493620-38-XXXX	Acute Tox. 4; H302 Eye Irrit. 2; H319 Skin Sens. 1B; H317 Aquatic Chronic 2; H411	>= 0.25 - < 1

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alkyl		specific concentration limit Skin Sens. 1B; H317 9.4 % Eye Irrit. 2; H319 50.1 %	
1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-	94270-86-7 01-2119982395-25	Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 M-Factor (Acute aquatic toxicity): 1	>= 0.1 - < 0.25
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8 230-528-9	Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT RE 1; H372 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1	>= 0.025 - < 0.1
(Z)-octadec-9-enylamine	112-90-3 204-015-5 612-283-00-3	Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373 (Liver, Gastrointestinal tract, Immune system) Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10 Acute toxicity estimate	>= 0.0025 - < 0.025

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		Acute oral toxicity: 300.03 mg/kg	
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For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- If inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If not breathing, give artificial respiration.
Call a physician or poison control center immediately.
If breathing is difficult, give oxygen.
Keep respiratory tract clear.
- In case of skin contact : Wash off with soap and plenty of water.
If symptoms persist, call a physician.
Take off contaminated clothing and wash before reuse.
- In case of eye contact : Rinse thoroughly with plenty of water, also under the eyelids.
If eye irritation persists, consult a specialist.
- If swallowed : Rinse mouth with water.
If victim is fully conscious, give a cupful of water.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Never give anything by mouth to an unconscious person.
Do not give milk or alcoholic beverages.
Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : No information available.
- Risks : No information available.
- Harmful if inhaled.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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Water mist
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting : Burning produces obnoxious and toxic fumes.

5.3 Advice for firefighters

Special protective equipment for fire-fighters : Wear full protective clothing and self-contained breathing apparatus.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Material can create slippery conditions.

6.2 Environmental precautions

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.
No special environmental precautions required.
Avoid release to the environment.
The product should not be allowed to enter drains, water courses or the soil.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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- Advice on safe handling : Take care to avoid waste and spillage when weighing, loading and mixing the product.
Avoid spillage on floor as the product can become very slippery when wet.
Avoid contact with skin and eyes.
Avoid formation of aerosol.
Do not breathe vapors or spray mist.
Wear personal protective equipment.
For personal protection see section 8.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
- Dust explosion class : No data available

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Ambient temperature Keep containers tightly closed in a dry, cool and well-ventilated place.

Storage class (TRGS 510) : 10

Storage period : 5 y

Further information on storage stability : Keep in a dry place.

No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Lubricant

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
N-1-naphthylaniline	90-30-2	AGW (Inhalable fraction)	2 mg/m ³	DE TRGS 900
	Peak-limit category: 2;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child, Substance sensitizing through the skin			
Dec-1-ene, dimers, hydrogenated	68649-11-6	AGW (Alveolate fraction)	5 mg/m ³	DE TRGS 900
	Peak-limit category: 4;(II)			

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	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
N-1-naphthylaniline	90-30-2	AGW (Inhalable fraction)	2 mg/m ³	DE TRGS 900
	Peak-limit category: 2;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child, Substance sensitizing through the skin			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Routes of exposure	Potential health effects	Value
Dec-1-ene, dimers, hydrogenated	Workers	Inhalation	Acute systemic effects	60 mg/m ³
bis(4-(1,1,3,3-tetramethylbutyl)phenyl)amine	Workers	Dermal	Long-term systemic effects	14 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	49.3 mg/m ³
	General exposures	Skin contact	Long-term systemic effects	5 mg/kg bw/day
	General exposures	Inhalation	Long-term systemic effects	7.4 mg/m ³
	General exposures	Ingestion	Long-term systemic effects	5 mg/kg bw/day
N-1-naphthylaniline	Workers	Inhalation	Long-term systemic effects	0.08 mg/m ³
	Workers	Inhalation	Acute systemic effects	44 mg/m ³
	Workers	Dermal	Long-term systemic effects	0.02 mg/kg
	Workers	Dermal	Acute systemic effects	6.67 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0.015 mg/m ³
	Consumers	Inhalation	Acute systemic effects	33 mg/m ³
	Consumers	Dermal	Long-term systemic effects	0.08 mg/kg
	Consumers	Dermal	Long-term systemic effects	3.33 mg/kg
	Consumers	Ingestion	Long-term systemic effects	0.008 mg/kg
	Consumers	Ingestion	Acute systemic effects	2 mg/kg
1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-	Workers	Inhalation	Long-term systemic effects	1.3 mg/m ³
	Workers	Dermal	Long-term systemic effects	0.4 mg/kg
	General expo-	Inhalation	Long-term systemic	0.3 mg/m ³

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	routes		effects	
	General exposures	Dermal	Long-term systemic effects	0.2 mg/kg
	General exposures	Oral	Long-term systemic effects	0.2 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
N-1-naphthylaniline	Fresh water	0.0002 mg/l
	Sea water	0.00002 mg/l
	STP	100 mg/l
	Fresh water sediment	0.0344 mg/kg dry weight (d.w.)
	Sea sediment	0.00344 mg/kg dry weight (d.w.)
	Soil	0.0068 mg/kg dry weight (d.w.)
	Secondary Poisoning	7.173 mg/kg dry weight (d.w.)
1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-	Fresh water	0.009 mg/l
	Sea water	0.001 mg/l
	Sewage treatment plant	0.69 mg/l
	Fresh water sediment	0.127 mg/kg dry weight (d.w.)
	Sea sediment	0.013 mg/kg dry weight (d.w.)
	Soil	0.02 mg/kg dry weight (d.w.)

8.2 Exposure controls

Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Safety glasses with side-shields conforming to EN166

Hand protection

Material : Polyvinyl alcohol or nitrile- butyl-rubber gloves
Remarks : Before removing gloves clean them with soap and water.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Request information on glove permeation properties from the glove supplier.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374

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derived from it.

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : not required under normal use
In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
In the case of vapor formation use a respirator with an approved filter.

Protective measures : Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	oily
Color	:	dark yellow
Odor	:	ester-like
Odor Threshold	:	Not relevant
Melting point/freezing point	:	Not applicable
Boiling point/boiling range	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	> 200 °C
Decomposition temperature	:	No data available
Self-Accelerating decomposition temperature (SADT)	:	No data available
pH	:	Not applicable
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	41.4 mm ² /s (40 °C)
Solubility(ies)		

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Water solubility	:	Not applicable
Solubility in other solvents	:	No data available
Dissolution Rate	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Dispersion Stability	:	No data available
Vapor pressure	:	No data available
Relative density	:	0.88 (15 °C)
Density	:	No data available
Relative vapor density	:	No data available

9.2 Other information

Metal corrosion rate	:	Not applicable
Dust explosion class	:	No data available
Evaporation rate	:	No data available
Oxidizing potential	:	No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

No decomposition if stored and applied as directed.
Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Stable under recommended storage conditions. No decomposition if used as directed.
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10.4 Conditions to avoid

Conditions to avoid	:	Contamination Direct sources of heat. Strong sunlight for prolonged periods. Exposure to air or moisture over prolonged periods.
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10.5 Incompatible materials

Materials to avoid	:	Strong oxidizing agents Strong acids and strong bases
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10.6 Hazardous decomposition products

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.
Oxides of phosphorus

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Harmful if inhaled.

Product:

Acute inhalation toxicity : Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.

Acute toxicity estimate: 3.07 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: Calculation method

Components:

Dec-1-ene, dimers, hydrogenated:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): 1.17 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

Method: OECD Test Guideline 402

GLP: yes

Assessment: The substance or mixture has no acute dermal toxicity

Remarks: No mortality observed at this dose.

Gas oils (petroleum), hydrodesulfurized:

Acute inhalation toxicity : LC50 (Rat): 4.6 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Assessment: The component/mixture is moderately toxic after short term inhalation.

N-1-naphthylaniline:

Acute oral toxicity : LD50 (Rat): 1,625 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit, male): > 5,000 mg/kg

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Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorous pentoxide, and salted by amines, C12-14- tert—alkyl:

Acute oral toxicity : LD50 (Rat, male and female): 2,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Acute oral toxicity : LD50 (Rat): 3,313 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

(Z)-N-9-octadecenylpropane-1,3-diamine:

Acute oral toxicity : LD50 (Rat, female): 500 mg/kg
Method: OECD Test Guideline 423

(Z)-octadec-9-enylamine:

Acute oral toxicity : Acute toxicity estimate: 300.03 mg/kg
Method: Calculation method

LD50 (Rat, male and female): 1,689 mg/kg
Method: OECD Test Guideline 401

Skin corrosion/irritation

Not classified due to lack of data.

Components:

Dec-1-ene, dimers, hydrogenated:

Species : Rabbit
Result : No skin irritation

Gas oils (petroleum), hydrodesulfurized:

Result : Irritating to skin.

N-1-naphthylaniline:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : no

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Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide,
propoxylated, esterified with diphosphorous pentoxide, and salted by amines, C12-14- tert—

alkyl:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Species : Rabbit
Exposure time : 24 h
Assessment : Irritating to skin.
Method : OECD-Guideline No. 404
Result : Skin irritation
GLP : no

(Z)-N-9-octadecenylpropane-1,3-diamine:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Causes burns.

(Z)-octadec-9-enylamine:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : Corrosive after 3 minutes to 1 hour of exposure

Serious eye damage/eye irritation

Not classified due to lack of data.

Components:

Dec-1-ene, dimers, hydrogenated:

Species : Rabbit
Result : No eye irritation

N-1-naphthylaniline:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation
GLP : no

Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide,
propoxylated, esterified with diphosphorous pentoxide, and salted by amines, C12-14- tert—

alkyl:

Species : Rabbit

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Result : Eye irritation
GLP : yes

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Species : Rabbit
Result : No eye irritation

(Z)-octadec-9-enylamine:

Result : Corrosive

Respiratory or skin sensitization

Skin sensitization

Not classified due to lack of data.

Respiratory sensitization

Not classified due to lack of data.

Components:

N-1-naphthylaniline:

Test Type : Maximization Test
Routes of exposure : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Probability or evidence of low to moderate skin sensitization rate in humans
GLP : no

Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide,

propoxylated, esterified with diphosphorous pentoxide, and salted by amines, C12-14- tert—

alkyl:

Test Type : Local lymph node assay (LLNA)
Routes of exposure : Skin contact
Species : Mouse
Method : OECD Test Guideline 429
Result : The product is a skin sensitizer, sub-category 1B.
GLP : yes

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Routes of exposure : Dermal
Species : Guinea pig
Result : May cause sensitization by skin contact.

Germ cell mutagenicity

Not classified due to lack of data.

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Components:

N-1-naphthylaniline:

- Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: No information available.
- Test Type: Chinese Hamster Ovary (CHO)
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: No information available.
- Genotoxicity in vivo : Test Type: dominant lethal test
Species: Mouse (male)
Application Route: Intraperitoneal
Method: OECD Test Guideline 478
Result: negative
GLP: No information available.
- Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects., Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorous pentaoxide, and salted by amines, C12-14- tert—alkyl:

- Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
- Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
- Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male)
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: negative
GLP: yes

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Carcinogenicity

Not classified due to lack of data.

Components:

N-1-naphthylaniline:

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Not classified due to lack of data.

Components:

N-1-naphthylaniline:

Effects on fetal development : Test Type: Pre-natal
Species: Rat, female
Application Route: Oral
Dose: 15 - 50 - 150 milligram per kilogram
General Toxicity Maternal: NOAEL: 50 mg/kg bw/day
Developmental Toxicity: NOAEL: 150 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes

Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorous pentoxide, and salted by amines, C12-14- tert-alkyl:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 15 - 150 - 750 milligram per kilogram
General Toxicity Parent: NOEL: 15 mg/kg body weight
Method: OECD Test Guideline 421
GLP: yes

Effects on fetal development : Test Type: reproductive and developmental toxicity study
Species: Rat, female
Application Route: Oral
Dose: 15 - 150 - 750 milligram per kilogram
General Toxicity Maternal: NOEL: 15 mg/kg body weight
GLP: yes

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Effects on fertility : General Toxicity Parent: NOAEL: 45 mg/kg body weight
Fertility: NOAEL: 150 mg/kg body weight
Early Embryonic Development: NOAEL: 45 mg/kg body weight

STOT-single exposure

Not classified due to lack of data.

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Components:

(Z)-octadec-9-enylamine:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

Not classified due to lack of data.

Components:

N-1-naphthylaniline:

Routes of exposure : Oral
Target Organs : Blood, Kidney
Assessment : May cause damage to organs through prolonged or repeated exposure.

(Z)-N-9-octadecenylpropane-1,3-diamine:

Assessment : Causes damage to organs through prolonged or repeated exposure.

(Z)-octadec-9-enylamine:

Routes of exposure : Ingestion
Target Organs : Gastrointestinal tract, Immune system, Liver
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Repeated dose toxicity

Components:

N-1-naphthylaniline:

Species : Rat, male and female
LOAEL : 5 mg/kg
Application Route : Oral
Exposure time : 90 h
Number of exposures : dail
Dose : 5 - 25 - 50 mg/kg bw/day
Method : OECD Test Guideline 408
GLP : yes
Remarks : Subchronic toxicity

Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide,
propoxylated, esterified with diphosphorous pentaoxide, and salted by amines, C12-14- tert—
alkyl:

Species : Rat, male and female
NOEL : 50 mg/kg
Application Route : Oral
Exposure time : 28 h
Dose : 50 - 150 - 500 mg/kg bw/day

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1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Species : Rat
NOAEL : 45 mg/kg
Application Route : Oral

(Z)-N-9-octadecenylpropane-1,3-diamine:

Species : Rat, male and female
Application Route : Oral
Dose : 1.25

Aspiration toxicity

Not classified due to lack of data.

Components:

Dec-1-ene, dimers, hydrogenated:

May be fatal if swallowed and enters airways.

Gas oils (petroleum), hydrodesulfurized:

May be fatal if swallowed and enters airways.

(Z)-octadec-9-enylamine:

May be fatal if swallowed and enters airways.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Gas oils (petroleum), hydrodesulfurized:

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

N-1-naphthylaniline:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.44 mg/l
Exposure time: 96 h

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Test Type: semi-static test
Analytical monitoring: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.68 mg/l
Exposure time: 48 h
Test Type: semi-static test
Analytical monitoring: yes

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (Protozoa): 2 mg/l
Exposure time: 48 h

EC50 (Bacteria): > 10,000 mg/l
Exposure time: 3 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.02 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Analytical monitoring: yes

M-Factor (Chronic aquatic toxicity) : 1

Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorous pentoxide, and salted by amines, C12-14- tert-alkyl:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): ca. 24 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 203
GLP: yes
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): ca. 91.4 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 202
GLP: yes
Remarks: Fresh water

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 15 mg/l
End point: Growth rate
Exposure time: 96 h
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: yes
Remarks: Fresh water

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- NOEC (Pseudokirchneriella subcapitata (green algae)): 3.3 mg/l
End point: Growth rate
Exposure time: 96 h
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: yes
Remarks: Fresh water
- Toxicity to microorganisms : EC50 (activated sludge): ca. 2,433 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.12 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Analytical monitoring: no
Method: OECD Test Guideline 211
GLP: yes
Remarks: Fresh water
- 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:**
- Toxicity to fish : LC50 (Zebra fish (Brachydanio rerio)): 1.3 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.05 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: Immobilization
Method: OECD Test Guideline 202
GLP: yes
- EC100 (Daphnia magna (Water flea)): 1.93 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 0.976 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes
- EC10 (Desmodesmus subspicatus (green algae)): 0.658 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- M-Factor (Acute aquatic toxicity) : 1

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Toxicity to microorganisms : EC50 (Bacteria): 13 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

(Z)-N-9-octadecenylpropane-1,3-diamine:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 0.148 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.013 - 0.0258 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Fresh water

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 0.507 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Fresh water

EC10 (Desmodesmus subspicatus (green algae)): 0.188 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Fresh water

M-Factor (Acute aquatic toxicity) : 10

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0.001 - 0.01 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
Remarks: Fresh water

M-Factor (Chronic aquatic toxicity) : 1

Ecotoxicology Assessment

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

(Z)-octadec-9-enylamine:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.06 mg/l
End point: mortality
Exposure time: 96 h
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.011 mg/l
End point: Immobilization
Exposure time: 48 h
Analytical monitoring: yes
Method: OECD Test Guideline 202

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GLP: yes

Toxicity to algae/aquatic plants : ErC50 (green algae): 0.46 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

NOEC (green algae): 0.15 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

M-Factor (Acute aquatic toxicity) : 10

M-Factor (Chronic aquatic toxicity) : 10

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Components:

N-1-naphthylaniline:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: According to the results of tests of biodegradability this product is not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301
GLP: yes

Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorous pentoxide, and salted by amines, C12-14- tert-alkyl:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge, adapted
Result: Not readily biodegradable.
Biodegradation: 3.6 %
Exposure time: 28 d

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

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Biodegradability : Test Type: Primary biodegradation
Concentration: 20 mg/l
Result: Not readily biodegradable.
Biodegradation: 7 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: no
Remarks: see user defined free text

(Z)-N-9-octadecenylpropane-1,3-diamine:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 66 %
Exposure time: 28 d

(Z)-octadec-9-enylamine:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 44 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

N-1-naphthylaniline:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Exposure time: 56 d
Temperature: 25 °C
Concentration: 0.1 mg/l
Bioconcentration factor (BCF): 427 - 2,730

Partition coefficient: n-octanol/water : log Pow: 4.28

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Partition coefficient: n-octanol/water : log Pow: > 6

(Z)-octadec-9-enylamine:

Bioaccumulation : Bioconcentration factor (BCF): 1,200

Partition coefficient: n-octanol/water : log Pow: 7.5 (20 °C)
Method: Calculated value

12.4 Mobility in soil

Product:

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Mobility : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : 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.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of wastes in an approved waste disposal facility. The product should not be allowed to enter drains, water courses or the soil. In accordance with local and national regulations. Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Dispose of as unused product. Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number or ID number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

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14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 75, 3

If you intend to use this product as tattoo ink, please contact your vendor.

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 57).

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors : Neither banned nor restricted

Council Regulation (EC) No 273/2004 on drug precursors : Not applicable

Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the : Not applicable

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control of major-accident hazards involving dangerous substances.

Water hazard class (Germany) : WGK 3 highly water endangering
Classification according to AwSV, Annex 1 (5.2)

15.2 Chemical Safety Assessment

No information available.

SECTION 16: Other information

Full text of H-Statements

H302	: Harmful if swallowed.
H304	: May be fatal if swallowed and enters airways.
H314	: Causes severe skin burns and eye damage.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.
H332	: Harmful if inhaled.
H335	: May cause respiratory irritation.
H372	: Causes damage to organs through prolonged or repeated exposure.
H373	: May cause damage to organs through prolonged or repeated exposure if swallowed.
H373	: May cause damage to organs through prolonged or repeated exposure.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H411	: Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Asp. Tox.	: Aspiration hazard
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitization
STOT RE	: Specific target organ toxicity - repeated exposure
STOT SE	: Specific target organ toxicity - single exposure
DE TRGS 900	: Germany. TRGS 900 - Occupational exposure limit values.
DE TRGS 900 / AGW	: Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard

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of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Classification procedure:

Acute Tox. 4	H332	Calculation method
Aquatic Chronic 3	H412	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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