

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

**1.1. Product identifier**

Pirate Cruise 20W-50

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

**Use of the substance/mixture**

motor oil

**Uses advised against**

none

**1.3. Details of the supplier of the safety data sheet**

Company name: Mabanol GmbH & Co. KG  
Street: Admiralitätstraße 55  
Place: D-20459 Hamburg  
**Responsible Department:**  
Telephone: +49 (0) 40 36809988

**1.4. Emergency telephone:** Giftinformationszentrale Göttingen  
Telephone: 0551/1 92 40

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification according to Directive 67/548/EEC or 1999/45/EC**

This mixture is not classified as hazardous according to Directive 1999/45/EC.

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard categories:  
Hazardous to the aquatic environment: Aquatic Chronic 3  
Hazard Statements:  
Harmful to aquatic life with long lasting effects.

**Hazard Overview**

Physical hazards: No risks worthy of mention.  
health hazards: No risks worthy of mention.  
Environmental hazards: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**2.2. Label elements**

**Hazard statements**

H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P273 Avoid release to the environment.  
P501 Treat the recovered material as prescribed in the section on waste disposal.

**2.3. Other hazards**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.  
This mixture contains no substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH.

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
265-159-2	Baseoil - unspecified, Distillates (petroleum), solvent-dewaxed light paraffinic	1 - < 5 %
64742-56-9	Xn - Harmful R65	
649-469-00-9	Asp. Tox. 1; H304	
01-2119480132-48		
	Mineral oil*	1 - < 5 %
	Xn - Harmful R65	
	Asp. Tox. 1; H304	
283-392-8	Phosphorodithionic acid, mixed O,O-bis (1,3-dimethylbutyl and iso-Pr)esters, zins salts	< 1 %
84605-29-8	Xi - Irritant, N - Dangerous for the environment R38-41-51-53	
	Skin Irrit. 2, Eye Dam. 1, Aquatic Chronic 2; H315 H318 H411	
01-2119493626-26		
310-154-3	Phenol, dodecyl-, branched	< 0.1 %
121158-58-5	Repr. Cat. 3, Xi - Irritant, N - Dangerous for the environment R62-36/38-50-53	
	Repr. 2, Skin Irrit. 2, Eye Irrit. 2, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 10); H361 H315 H319 H400 H410	
01-2119513207-49		

Full text of R-, H- and EUH-phrases: see section 16.

#### Further Information

\* The mineral oils contained can be described by one or more of the following numbers:

EC-no.: 265-157-1, 265-169-7, 265-158-7, 265-159-2

REACH-no.: 01-2119484627-25, 01-2119471299-27, 01-2119487077-29, 01-2119480132-48

Note L : The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions — Dimethyl sulphoxide extraction refractive index method', Institute of Petroleum, London. This note applies only to certain complex oil-derived substances in Part 3.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

#### After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In all cases of doubt, or when symptoms persist, seek medical advice.

#### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing. In case of skin irritation, consult a physician.

#### After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

**After ingestion**

Do NOT induce vomiting. Rinse mouth thoroughly with water. Let water be drunk in little sips (dilution effect). Never give anything by mouth to an unconscious person or a person with cramps. When in doubt or if symptoms are observed, get medical advice.

**4.2. Most important symptoms and effects, both acute and delayed**

If swallowed or in the event of vomiting, risk of entering the lungs.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Sand. Foam. Carbon dioxide (CO<sub>2</sub>). Extinguishing powder. In case of major fire and large quantities:  
Water spray jet. Water mist.

**Unsuitable extinguishing media**

Full water jet

**5.2. Special hazards arising from the substance or mixture**

Burning produces heavy smoke.

Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO<sub>2</sub>) Sulphur dioxide (SO<sub>2</sub>)

Nitrogen oxides (NO<sub>x</sub>)

**5.3. Advice for firefighters**

In case of fire and/or explosion do not breathe fumes. Wear a self-contained breathing apparatus and chemical protective clothing.

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.  
Co-ordinate fire-fighting measures to the fire surroundings.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Wear personal protection equipment (refer to section 8).

Ventilate affected area.

Special danger of slipping by leaking/spilling product.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Do not allow to enter into soil/subsoil. If required, notify relevant authorities according to all applicable regulations.

**6.3. Methods and material for containment and cleaning up**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Treat the recovered material as prescribed in the section on waste disposal.

Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

No information available.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

Wear suitable protective clothing. ( See section 8. )

Avoid formation of oil dust.

**Advice on protection against fire and explosion**

Usual measures for fire prevention. Keep away from sources of ignition - No smoking.  
Fire class B

**Further information on handling**

Do not breathe vapour/aerosol.  
Avoid contact with skin and eyes.  
Advices on general occupational hygiene: See section 8.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place. Only use containers specifically approved for the substance/product.

**Advice on storage compatibility**

Do not store together with: Gas. Explosives. Radioactive substances. Infectious substances

**Further information on storage conditions**

Temperature control required. Protect from light. Keep container tightly closed. Do not allow contact with air.

**7.3. Specific end use(s)**

refer to chapter 1.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**PNEC values**

CAS No	Substance	Value
121158-58-5	Phenol, dodecyl-, branched	
Environmental compartment		
Freshwater		0,000074 mg/l
Soil		0,118 mg/kg
Marine water		0,000074 mg/l
Freshwater sediment		0,226 mg/kg
Marine sediment		0,026 mg/kg

**Additional advice on limit values**

air limit values:  
Possibility of exposure to Aerosol  
Limit value = 5 mg/ m3 - Source: ACGIH

**8.2. Exposure controls**



**Appropriate engineering controls**

Provide adequate ventilation.

**Protective and hygiene measures**

Clean skin thoroughly after working.  
Do not put any product-impregnated cleaning rags into your trouser pockets.

**Eye/face protection**

Safety goggles with side protection. In case of increased risk add protective face shield. DIN EN 166

**Hand protection**

Use safety gloves of following materials: NBR (nitrile) / neopren / viton (permeationslevel 5 - 6), Cat. II according to norm EN 388.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

**Skin protection**

Oil-resistant and hardly inflammable protective clothing.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

- aerosol or mist formation
- exceeding exposure limit values

Suitable respiratory protection apparatus: Respiratory equipment in case of nebulosity or aerosol: Use a mask with a filter type A2, A2/P2 or ABEK.

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

**Environmental exposure controls**

No information available.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	clear
Odour:	characteristic

**Test method**

pH-Value: No information available.

**Changes in the physical state**

Melting point: No information available.

Initial boiling point and boiling range: No information available.

Sublimation point: No information available.

Softening point: No information available.

Pour point: -27 °C ASTM D 5985

Flash point: 266 °C

Sustaining combustion: No data available

**Flammability**

Solid: No information available.

Gas: No information available.

**Explosive properties**

none

Lower explosion limits: No information available.

Upper explosion limits: No information available.

Ignition temperature: No information available.

**Auto-ignition temperature**

**Pirate Cruise 20W-50**

Solid:	No information available.
Gas:	No information available.
Decomposition temperature:	No information available.
<b>Oxidizing properties</b>	
none	
Vapour pressure: (at 20 °C)	No information available.
Vapour pressure: (at 50 °C)	No information available.
Density (at 15 °C):	0,886 g/cm <sup>3</sup> DIN 51757
Bulk density:	No information available.
Water solubility:	No information available.
<b>Solubility in other solvents</b>	
No information available.	
Partition coefficient:	No information available.
Viscosity / dynamic:	No information available.
Viscosity / kinematic: (at 40 °C)	153,1 mm <sup>2</sup> /s DIN EN ISO 3104
Flow time:	No information available.
Vapour density:	No information available.
Evaporation rate:	No information available.
Solvent separation test:	No information available.
Solvent content:	No information available.
<b>9.2. Other information</b>	
Solid content:	No information available.

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No information available.

**10.2. Chemical stability**

Stable at ambient temperature.

**10.3. Possibility of hazardous reactions**

No hazardous reactions known.

**10.4. Conditions to avoid**

No information available.

**10.5. Incompatible materials**

Oxidising agent, strong

**10.6. Hazardous decomposition products**

No hazardous decomposition products known.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicokinetics, metabolism and distribution**

No information available.

#### Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
64742-56-9	Baseoil - unspecified, Distillates (petroleum), solvent-dewaxed light paraffinic				
	oral	LD50	>5000 mg/kg	Rat.	ECHA Dossier
	dermal	LD50	>5000 mg/kg	Rabbit.	ECHA Dossier
	inhalative (4 h) aerosol	LC50	>5,53 mg/l	Rat.	ECHA Dossier
84605-29-8	Phosphorodithionic acid, mixed O,O-bis (1,3-dimethylbutyl and iso-Pr)esters, zins salts				
	oral	LD50	3100 mg/kg	Rat (OECD 401 )	ECHA Dossier
	dermal	LD50	>2000 mg/kg	Rabbit (OECD 402 )	ECHA Dossier
121158-58-5	Phenol, dodecyl-, branched				
	oral	LD50	2100 mg/kg	Rat (OECD 401)	ECHA Dossier
	dermal	LD50	15000 mg/kg	Rabbit (OECD 402)	ECHA Dossier

#### Irritation and corrosivity

Based on available data, the classification criteria are not met.

Phosphorodithionic acid, mixed O,O-bis (1,3-dimethylbutyl and iso-Pr)esters, zins salts

Specific concentration limit (SCL):

>=6,25% (Skin Irrit. 2)

> 12,5 % (Eye Dam. 1)

> 10% (Eye Irrit. 2)

#### Sensitising effects

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### Severe effects after repeated or prolonged exposure

Based on available data, the classification criteria are not met.

Baseoil - unspecified, Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Subacute inhalative toxicity :

Method: -

Exposure time: 28d

Species: Rat

Results: > 980 mg/m<sup>3</sup>

literature information: J Appl Toxicol, Vol 11(4), pp 297-302

Subacute dermal toxicity :

Method: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Exposure time: 28d

Species: Rabbit

Results: 1000 mg/kg

literature information: ECHA Dossier

Baseoil - unspecified, Distillates (petroleum), solvent-dewaxed light paraffinic:

Subchronic oral toxicity:

Exposure time: 90d

Species: Sprague-Dawley Rat.

Method: OECD Guideline 408

Result: LOAEL = 125 mg/kg

literature information: ECHA Dossier

Subacute inhalative toxicity :

Exposure time: 28d

Species: Sprague-Dawley Rat.

Result: NOAEC > 980 mg/m<sup>3</sup>

literature information: ECHA Dossier

Subacute dermal toxicity :

Exposure time: 28d

Species: Rabbit

Method: OECD Guideline 410

Result: NOAEL 1000 mg/kg

literature information: ECHA Dossier

Phenol, dodecyl-, branched:

Subchronic oral toxicity:

Exposure time: 90d

Method: OECD Guideline 408

Species: Rat

Results: NOAEL = 100 mg/kg

Subacute oral toxicity :

Exposure time: 28d

Method: OECD Guideline 407

Species: Rat

Results: NOAEL = 60 mg/kg

literature information: ECHA Dossier

**Carcinogenic/mutagenic/toxic effects for reproduction**



Based on available data, the classification criteria are not met.

Baseoil - unspecified, Distillates (petroleum), solvent-dewaxed heavy paraffinic:

In vitro mutagenicity/genotoxicity:

-OECD Guideline 471 (Bacterial Reverse Mutation Assay)

-OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

-OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)

Result: negative.

literature information: ECHA Dossier

Baseoil - unspecified, Distillates (petroleum), solvent-dewaxed light paraffinic:

In vitro mutagenicity/genotoxicity:

Method:

-OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)

-OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

-OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Result: = negative.

literature information: ECHA Dossier

Chronic dermal toxicity :

Exposure time: ~546 d

Species: Mouse.

Method: OECD Guideline 451

Result: Carcinogenicity = negative.

literature information: ECHA Dossier

Reproductive toxicity: :

Exposure route: oral.

Species: Rat.

Method: OECD Guideline 421

Result: NOAEL >1000 mg/kg

literature information: ECHA Dossier

Developmental toxicity/teratogenicity :

Exposure route: dermal.

Species: Rat.

Method: OECD Guideline 414

Result: NOAEL >2000 mg/kg

literature information: ECHA Dossier

Phosphorodithionic acid, mixed O,O-bis (1,3-dimethylbutyl and iso-Pr)esters, zins salts:

In vitro mutagenicity/genotoxicity: Ames test negative.

Phenol, dodecyl-, branched:

In vitro mutagenicity/genotoxicity:

-OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

-OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Results: negative.

literature information: ECHA dossier

Developmental toxicity/teratogenicity:

Species: Rat

Method: OECD Guideline 414 (Prenatal Developmental Toxicity Study)

Results: NOAEL 100 mg/kg

literature information: ECHA Dossier

## Pirate Cruise 20W-50

Reproductive toxicity:  
 Species: Sprague-Dawley Rat  
 Method: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)  
 Results: NOAEL 15 mg/kg  
 literature information: ECHA Dossier

### Aspiration hazard

Based on available data, the classification criteria are not met.

### Practical experience

### Other observations

Frequent contact specially if dried out may cause skin and eye irritations.

## SECTION 12: Ecological information

### 12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h]   [d]	Species	Source
64742-56-9	Baseoil - unspecified, Distillates (petroleum), solvent-dewaxed light paraffinic					
	Acute fish toxicity	LC50	>100 mg/l	96 h	Pimephales promelas	ECHA Dossier
	Acute algae toxicity	ErC50	>100 mg/l	72 h	Pseudokirchnerella subcapitata	ECHA Dossier
	Acute crustacea toxicity	EC50	>10000 mg/l	48 h	Daphnia magna	ECHA Dossier
	Crustacea toxicity	NOEC	10 mg/l	21 d	Daphnia magna	ECHA Dossier
84605-29-8	Phosphorodithionic acid, mixed O,O-bis (1,3-dimethylbutyl and iso-Pr)esters, zins salts					
	Acute fish toxicity	LC50 mg/l	LL50: 4,5	96 h	Oncorhynchus mykiss (OECD 203)	ECHA Dossier
121158-58-5	Phenol, dodecyl-, branched					
	Acute fish toxicity	LC50 mg/l	EL 50 = 40	96 h	Pimephales promelas	ECHA Dossier
	Acute algae toxicity	ErC50	0,36 mg/l	72 h	Desmodesmus subspicatus	ECHA Dossier
	Crustacea toxicity	NOEC	0,0037 mg/l	21 d	daphnia magna (OECD 211)	ECHA Dossier

### 12.2. Persistence and degradability

The product is slightly soluble in water. It can be largely eliminated from the water by abiotic processes, e.g. mechanical separation.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
64742-56-9	Baseoil - unspecified, Distillates (petroleum), solvent-dewaxed light paraffinic			
	OECD 301B / ISO 9439 / EEC 92/69 annex V, C.4-C	2-4%	28	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).			
84605-29-8	Phosphorodithionic acid, mixed O,O-bis (1,3-dimethylbutyl and iso-Pr)esters, zins salts			
	OECD 301B / ISO 9439 / EEC 92/69 annex V, C.4-C	1,5 %	28	ECHA Dossier
	Product is not easily biodegradable.			
121158-58-5	Phenol, dodecyl-, branched			
	OECD 301B / ISO 9439 / EEC 92/69 annex V, C.4-C	25%	28	ECHA Dossier
	Product is not easily biodegradable.			

### 12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
84605-29-8	Phosphorodithionic acid, mixed O,O-bis (1,3-dimethylbutyl and iso-Pr)esters, zins salts	0,56
121158-58-5	Phenol, dodecyl-, branched	7,1

### BCF

CAS No	Chemical name	BCF	Species	Source
121158-58-5	Phenol, dodecyl-, branched	2,9		

### 12.4. Mobility in soil

No information available.

### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### 12.6. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Advice on disposal

Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances Classified as hazardous waste.

#### Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

### Land transport (ADR/RID)

- 14.1. UN number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

### Inland waterways transport (ADN)

- 14.1. UN number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

### Marine transport (IMDG)

- 14.1. UN number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

**Air transport (ICAO)**

- 14.1. UN number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**14.6. Special precautions for user**

Informations for safe handling see chapter 7.  
Informations for personal protective equipment see chapter 8.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

not relevant

**SECTION 15: Regulatory information**

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

**EU regulatory information**

2010/75/EU (VOC): No information available.

2004/42/EC (VOC): No information available.

**Additional information**

Not subject to 96/82/EC  
Observe in addition any national regulations!

**National regulatory information**

Water contaminating class (D): 2 - water contaminating

**Additional information**

none

**15.2 Chemical Safety Assessment**

not applicable.

**SECTION 16: Other information**

**Changes**

Rev. : 1,0 - 12.04.2015

Rev.: 1,01 - 28.04.2015

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
CAS Chemical Abstracts Service  
DNEL: Derived No Effect Level  
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER  
International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
LOAEL: Lowest observed adverse effect level  
LOAEC: Lowest observed adverse effect concentration

LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
NOAEL: No observed adverse effect level  
NOAEC: No observed adverse effect level  
NTP: National Toxicology Program  
N/A: not applicable  
OSHA: Concerning the International Transport of Dangerous Goods by Rail )  
PNEC: predicted no effect concentration  
PBT: Persistent bioaccumulative toxic  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail )  
SARA: Superfund Amendments and Reauthorization Act  
SVHC: substance of very high concern  
TRGS Technische Regeln für Gefahrstoffe  
TSCA: Toxic Substances Control Act  
VOC: Volatile Organic Compounds  
VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe  
WGK: Wassergefährdungsklasse

**Relevant R-phrases (Number and full text)**

- 36/38 Irritating to eyes and skin.
- 38 Irritating to skin.
- 41 Risk of serious damage to eyes.
- 50 Very toxic to aquatic organisms.
- 51 Toxic to aquatic organisms.
- 53 May cause long-term adverse effects in the aquatic environment.
- 62 Possible risk of impaired fertility.
- 65 Harmful: may cause lung damage if swallowed.

**Relevant H- and EUH-phrases (Number and full text)**

- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H361 Suspected of damaging fertility or the unborn child.
- 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 .
- H412 Harmful to aquatic life with long lasting effects .

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*