

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

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

1.1 Product identifier

Trade name : TUBIPERL SILVER FF

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

Use of the Sub-stance/Mixture : Textile auxiliary

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier

CHT Germany GmbH
Bismarckstraße 102
72072 Tübingen
Germany
Tel.: +49 7071 154 0
info@cht.com

CHT Switzerland AG
Kriessernstrasse 20
9462 Montlingen
Switzerland
Tel.: +41 71 763 88 11
info.switzerland@cht.com

Importer : -
-
-
-
-

Responsible Department : CHT Germany GmbH
CHT Switzerland AG
Product Safety
sds.germany@cht.com
sds.switzerland@cht.com

1.4 Emergency telephone number

Emergency telephone number : +1 703 527 3887 CHEMTREC (International, 24 hours)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Long-term (chronic) aquatic hazard, Category 3 H412: Harmful to aquatic life with long lasting effects.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves.
Response:
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

2-methyl-2H-isothiazol-3-one
1,2-benzisothiazol-3(2H)-one
mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
2-octyl-2H-isothiazol-3-one

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.

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.

SAFETY DATA SHEET

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Acrylate dispersion blended with pearl lustre pigments

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
2,2'-oxybisethanol	111-46-6 203-872-2 603-140-00-6 01-2119457857-21	Acute Tox. 4; H302	$\geq 1 - < 10$
Aryl ethylphenyl polyglycol ether	104376-75-2	Aquatic Chronic 3; H412	$\geq 1 - < 2,5$
octamethylcyclotetrasiloxane (REACH SVHC Candidate List)	556-67-2 209-136-7 014-018-00-1 01-2119529238-36	Flam. Liq. 3; H226 Repr. 2; H361f Aquatic Chronic 1; H410 M-Factor (Chronic aquatic toxicity): 10	$\geq 0,025 - < 0,1$
2-methyl-2H-isothiazol-3-one	2682-20-4 220-239-6 01-2120764690-50	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH071 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1 specific concentration limit Skin Sens. 1A; H317 $\geq 0,0015$ %	$\geq 0,0025 - < 0,025$
1,2-benzisothiazol-3(2H)-one	2634-33-5	Acute Tox. 4; H302	$\geq 0,0025 - <$

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version
4.0

Revision Date:
29.07.2022

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	220-120-9 613-088-00-6 01-2120761540-60	Acute Tox. 2; H330 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 <hr/> M-Factor (Acute aquatic toxicity): 1 <hr/> specific concentration limit Skin Sens. 1; H317 >= 0,05 %	0,025
mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9 613-167-00-5 01-2120764691-48	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 2; H310 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 <hr/> M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100 <hr/> specific concentration limit Skin Corr. 1C; H314 >= 0,6 % Skin Irrit. 2; H315 0,06 - < 0,6 % Eye Irrit. 2; H319 0,06 - < 0,6 % Skin Sens. 1A; H317 >= 0,0015 %	>= 0,0002 - < 0,0015
2-octyl-2H-isothiazol-3-one	26530-20-1 247-761-7 613-112-00-5	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400	>= 0,0002 - < 0,0015

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

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		Aquatic Chronic 1; H410 EUH071	
		M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100	
		specific concentration limit Skin Sens. 1A; H317 >= 0,0015 %	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Take off all contaminated clothing immediately.
Show this safety data sheet to the doctor in attendance.
- If inhaled : Move to fresh air.
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with soap and plenty of water.
If skin irritation persists, call a physician.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
If symptoms persist, call a physician.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do NOT induce vomiting.
Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : There may be reddening, swelling associated with itching on contact.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Carbon dioxide (CO₂)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

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Date of first issue: 27.05.2016

Water spray
Dry powder
Foam

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Hazardous decomposition products formed under fire conditions.
Can be released in case of fire:
Carbon oxides
Nitrogen oxides (NO_x)
acrylic monomers

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : In case of fire do not inhale smoke, conflagration gases and steams.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
The product itself does not burn.
The residual polymer after volatilizing the watery phase is combustible.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Contaminated surfaces will be extremely slippery.

6.2 Environmental precautions

Environmental precautions : The product should not be allowed to enter drains, water courses or the soil.
If the product contaminates rivers and lakes or drains inform respective authorities.
Pay attention to local or official regulations.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Close drains (risk of blockage caused by polymer precipitation).
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Clean contaminated surface thoroughly.
Dispose of in accordance with local regulations.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version
4.0

Revision Date:
29.07.2022

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.
- Advice on protection against fire and explosion : No special protective measures against fire required.
- Hygiene measures : Avoid contact with skin, eyes and clothing. Do not breathe vapours, aerosols. Take off all contaminated clothing immediately. Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Do always store in containers which correspond to the original ones. Keep container tightly closed. Inappropriate material for containers and conduit: Metals Suitable material for containers and conduit: Polyethylene
- Further information on storage conditions : Stir well before use. Protect from frost. Protect from temperatures over + 40 °C.
- Advice on common storage : No special precautions required.

7.3 Specific end use(s)

- Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Substance name	End Use	Exposure routes	Potential health effects	Value
2,2'-oxybisethanol	Workers	Inhalation	Long-term systemic effects	44 mg/m ³
	Workers	Inhalation	Long-term local effects	60 mg/m ³
	Workers	Skin contact	Long-term systemic effects	43 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	12 mg/m ³
	Consumers	Inhalation	Long-term local effects	12 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	21 mg/kg bw/day
octamethylcyclotetra-	Workers	Inhalation	Long-term systemic	73 mg/m ³

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

siloxane (REACH SVHC Candidate List)			effects	
	Workers	Inhalation	Long-term local effects	73 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	13 mg/m ³
	Consumers	Inhalation	Long-term local effects	13 mg/m ³
	Consumers	Ingestion	Long-term systemic effects	3,7 mg/kg bw/day
2-methyl-2H-isothiazol-3-one	Workers	Inhalation	Long-term local effects	0,021 mg/m ³
	Workers	Inhalation	Acute local effects	0,043 mg/m ³
	Consumers	Inhalation	Long-term local effects	0,021 mg/m ³
	Consumers	Inhalation	Acute local effects	0,043 mg/m ³
	Consumers	Ingestion	Long-term systemic effects	0,027 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	0,053 mg/kg bw/day
1,2-benzisothiazol-3(2H)-one	Workers	Inhalation	Long-term systemic effects	6,81 mg/m ³
	Workers	Skin contact	Long-term systemic effects	0,966 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1,2 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	0,345 mg/kg bw/day
mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Workers	Inhalation	Long-term local effects	0,02 mg/m ³
	Workers	Inhalation	Acute local effects	0,04 mg/m ³
	Consumers	Inhalation	Long-term local effects	0,02 mg/m ³
	Consumers	Inhalation	Acute local effects	0,04 mg/m ³
	Consumers	Ingestion	Long-term systemic effects	0,09 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	0,11 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
2,2'-oxybisethanol	Fresh water	10 mg/l
	Marine water	1 mg/l
	STP	199,5 mg/l
	Intermittent use/release	10 mg/l
	Fresh water sediment	20,9 mg/kg dry weight (d.w.)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

	Marine sediment	2,09 mg/kg dry weight (d.w.)
	Soil	1,53 mg/kg dry weight (d.w.)
octamethylcyclotetrasiloxane (REACH SVHC Candidate List)	Fresh water	1,5 µg/l
	Marine water	0,15 µg/l
	STP	10 mg/l
	Fresh water sediment	3 mg/kg dry weight (d.w.)
	Marine sediment	0,3 mg/kg dry weight (d.w.)
	Soil	0,54 mg/kg dry weight (d.w.)
	Secondary Poisoning	41 mg/kg food
2-methyl-2H-isothiazol-3-one	Fresh water	3,39 µg/l
	Marine water	3,39 µg/l
	Intermittent use/release	3,39 µg/l
	STP	0,23 mg/l
	Soil	47,1 µg/kg
1,2-benzisothiazol-3(2H)-one	Fresh water	4,03 µg/l
	Marine water	0,403 µg/l
	Intermittent use/release	1,1 µg/l
	STP	1,03 mg/l
	Fresh water sediment	49,9 µg/kg
	Marine sediment	4,99 µg/kg
	Soil	3 mg/kg dry weight (d.w.)
mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Fresh water	3,39 µg/l
	Marine water	3,39 µg/l
	Intermittent use/release	3,39 µg/l
	Marine water	3,39 µg/l
Remarks:	Intermittent use/release	
	STP	0,23 mg/l
	Fresh water sediment	0,027 mg/kg dry weight (d.w.)
	Marine sediment	0,027 mg/kg dry weight (d.w.)
	Soil	0,01 mg/kg dry weight (d.w.)

8.2 Exposure controls

Engineering measures

Solids with occupational exposure limits in liquid preparations do not cause an exposure in the workplace, because they are not present in a respirable form. Exposure can occur in the form of aerosols or after drying of the liquid the solids remain, possibly in a finely dispersed form. Provide sufficient air exchange and/or exhaust in work rooms.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0 Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

Personal protective equipment

Eye protection : Goggles (EN 166)

Hand protection

Material : Neoprene
Break through time : > 480 min
Glove thickness : > 0,5 mm
Protective index : Class 6

Remarks : The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. The obtained break through times according to EN 374 Part III are not measured under normal operating conditions. Therefore a maximum usage time of 50% of the break through time is recommended.

Skin and body protection : Wear suitable protective clothing (EN 14605).

Respiratory protection : In case the work place is not ventilated sufficiently and during spray processing, it is necessary to wear respiratory protective equipment.
Recommended Filter type:
Combination filter A/P (EN 141)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : Dispersion

Colour : silver-coloured

Odour : characteristic

Melting point/range : No data available

Boiling point/boiling range : ca. 100 °C

Upper explosion limit / Upper flammability limit : Not applicable

Lower explosion limit / Lower flammability limit : Not applicable

Flash point : Not applicable

pH : 7,6 - 9,5 (20 °C)
(undiluted)

Viscosity
Viscosity, dynamic : 14 000 - 18 000 mPa.s (20 °C)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

Brookfield RVT
20 rpm
spindle 5

Solubility(ies)
Water solubility : miscible

Partition coefficient: n-
octanol/water : Not applicable

Vapour pressure : ca. 23 hPa (20 °C)
Water

Density : ca. 1,0 g/cm³ (20 °C)

Relative vapour density : Not applicable

9.2 Other information

Oxidizing properties : Not applicable

Flammability (liquids) : does not ignite

Self-ignition : not auto-flammable

Evaporation rate : Not applicable

Conductivity : Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : Not applicable

10.5 Incompatible materials

Materials to avoid : Not applicable

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

SECTION 11: Toxicological information

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

Acute toxicity

Product:

- Acute oral toxicity : Acute toxicity estimate: > 2 000 mg/kg
Method: Calculation method
- Acute inhalation toxicity : Remarks: Based on available data, the classification criteria are not met.
- Acute dermal toxicity : Remarks: Based on available data, the classification criteria are not met.

Components:

2,2'-oxybisethanol:

- Acute oral toxicity : LD50 (Humans): ca. 1 000 mg/kg
Assessment: The component/mixture is moderately toxic after single ingestion.
- Acute inhalation toxicity : Remarks: Based on available data, the classification criteria are not met.
- Acute dermal toxicity : LD50 (Rabbit): 13 300 mg/kg

Aryl ethylphenyl polyglycol ether:

- Acute oral toxicity : LD50 (Rat): > 5 000 mg/kg

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

- Acute oral toxicity : LD50 (Rat, male): 4 800 mg/kg
Method: OECD Test Guideline 401
- Acute inhalation toxicity : LC50 (Rat, male and female): 36 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
- Acute dermal toxicity : LD50 (Rat): > 2 375 mg/kg
Method: OECD Test Guideline 402

2-methyl-2H-isothiazol-3-one:

- Acute oral toxicity : LD50 (Rat): 120 mg/kg
Method: EPA Method
- Acute inhalation toxicity : LC50 (Rat): 0,11 mg/l
Exposure time: 4 h

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rat): 242 mg/kg
Method: OECD Test Guideline 402

1,2-benzisothiazol-3(2H)-one:

Acute oral toxicity : LD50 (Rat): 1 020 mg/kg

Acute inhalation toxicity : LC50: > 0,05 - 0,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Remarks: value stated in literature

Acute dermal toxicity : LD50 (Rat): > 2 000 mg/kg

mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Acute oral toxicity : LD50 (Rat): 66 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 0,171 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): 87,12 mg/kg
Method: OECD Test Guideline 402

2-octyl-2H-isothiazol-3-one:

Acute oral toxicity : LD50 (Rat): 125 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 0,27 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rabbit): 311 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Product:

Remarks : Prolonged skin contact may cause skin irritation.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

Components:

2,2'-oxybisethanol:

Species : Rabbit
Result : No skin irritation

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Species : Rat
Method : OECD Test Guideline 404
Result : No skin irritation

2-methyl-2H-isothiazol-3-one:

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

1,2-benzisothiazol-3(2H)-one:

Result : Irritating to skin.

mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Species : Rabbit
Method : OECD Test Guideline 404
Result : Corrosive after 1 to 4 hours of exposure

2-octyl-2H-isothiazol-3-one:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Product:

Remarks : Contact with eyes may cause irritation.

Components:

2,2'-oxybisethanol:

Species : Rabbit
Result : No eye irritation

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

2-methyl-2H-isothiazol-3-one:

Species : Rabbit
Result : Risk of serious damage to eyes.

1,2-benzisothiazol-3(2H)-one:

Species : Rabbit
Result : Causes serious eye damage.

2-octyl-2H-isothiazol-3-one:

Result : Causes serious eye damage.

Respiratory or skin sensitisation

Product:

Remarks : May cause an allergic skin reaction.

Components:

2,2'-oxybisethanol:

Test Type : Maximisation Test
Species : Guinea pig
Result : Does not cause skin sensitisation.

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Did not cause sensitisation on laboratory animals.

2-methyl-2H-isothiazol-3-one:

Result : The product is a skin sensitiser, sub-category 1A.

1,2-benzisothiazol-3(2H)-one:

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : May cause sensitisation by skin contact.

mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Exposure routes : Dermal
Species : Guinea pig
Assessment : The product is a skin sensitiser, sub-category 1A.
Method : OECD Test Guideline 406
Result : May cause an allergic skin reaction.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

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2-octyl-2H-isothiazol-3-one:

Exposure routes : Skin contact
Species : Mouse
Method : OECD Test Guideline 429
Result : The product is a skin sensitiser, sub-category 1A.

Germ cell mutagenicity

Product:

Germ cell mutagenicity- Assessment : Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Carcinogenicity - Assessment : Based on available data, the classification criteria are not met.

Reproductive toxicity

Product:

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.

Components:

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Reproductive toxicity - Assessment : Suspected of damaging fertility., toxic effect on reproduction, category 2

STOT - single exposure

Product:

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

STOT - repeated exposure

Product:

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

Aspiration toxicity

Product:

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

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Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

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

Product:

Toxicity to fish : Remarks: No data is available on the product itself.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Argument by analogy

Toxicity to algae/aquatic plants : Remarks: No data is available on the product itself.

Toxicity to microorganisms : Remarks: No data is available on the product itself.

Components:

2,2'-oxybisethanol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 75 200 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10 000 mg/l
Exposure time: 48 h
Test Type: static test
Method: DIN 38412

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC20 (activated sludge): > 1 995 mg/l
Exposure time: 0,5 h
Test Type: static test
Method: DIN EN ISO 8192

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version
4.0

Revision Date:
29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

Aryl ethylphenyl polyglycol ether:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 10 - 100 mg/l
Exposure time: 96 h

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0,022 mg/l
Exposure time: 96 h
Remarks: Not classified due to data which are conclusive although insufficient for classification.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,015 mg/l
Exposure time: 48 h
Test Type: flow-through test
Remarks: Not classified due to data which are conclusive although insufficient for classification.

Toxicity to algae/aquatic plants : EC10 (Pseudokirchneriella subcapitata (algae)): >= 0,022 mg/l
Exposure time: 96 h
Remarks: Not classified due to data which are conclusive although insufficient for classification.

EC50 (Pseudokirchneriella subcapitata (algae)): > 0,022 mg/l
Exposure time: 96 h
Remarks: Not classified due to data which are conclusive although insufficient for classification.

Toxicity to microorganisms : EC50 (activated sludge): > 10 000 mg/l
Exposure time: 3 h
Test Type: static test
Method: ISO 8192

Toxicity to fish (Chronic toxicity) : NOEC: >= 0,0044 mg/l
Exposure time: 93 d
Species: Oncorhynchus mykiss (rainbow trout)
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0,0015 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: flow-through test

M-Factor (Chronic aquatic toxicity) : 10

2-methyl-2H-isothiazol-3-one:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4,77 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia (water flea)): 0,934 mg/l

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version
4.0

Revision Date:
29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

aquatic invertebrates		Exposure time: 48 h Test Type: flow-through test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0,22 mg/l Exposure time: 120 h Test Type: static test Method: OECD Test Guideline 201 NOEC (Pseudokirchneriella subcapitata (green algae)): 0,05 mg/l Exposure time: 120 h Test Type: static test Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to microorganisms	:	EC50 (activated sludge): 41 mg/l Exposure time: 3 h Test Type: static test Method: OECD Test Guideline 209
Toxicity to fish (Chronic toxicity)	:	NOEC: 4,93 mg/l Exposure time: 98 d Species: Oncorhynchus mykiss (rainbow trout) Test Type: flow-through test Method: OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0,044 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: flow-through test Method: OECD Test Guideline 211
M-Factor (Chronic aquatic toxicity)	:	1
1,2-benzisothiazol-3(2H)-one:		
Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 2,15 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia (water flea)): 2,9 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC10 (Selenastrum capricornutum (green algae)): 0,043 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

EC50 (*Selenastrum capricornutum* (green algae)): 0,11 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (activated sludge): 12,8 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Toxicity to fish : EC50 (*Oncorhynchus mykiss* (rainbow trout)): 0,22 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia* (water flea)): 0,12 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : NOEC (*Pseudokirchneriella subcapitata* (green algae)): 0,0012 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

EC50 (*Pseudokirchneriella subcapitata* (green algae)): 0,048 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 100

Toxicity to microorganisms : EC20 (activated sludge): 0,97 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 0,098 mg/l
Exposure time: 28 d
Species: *Oncorhynchus mykiss* (rainbow trout)
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,004 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 100

2-octyl-2H-isothiazol-3-one:

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version
4.0

Revision Date:
29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,036 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 0,42 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC10 (Navicula pelliculosa (Freshwater diatom)): 0,000224 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 201
- EC50 (Desmodesmus subspicatus (green algae)): 0,084 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- EC50 (Skeletonema costatum (marine diatom)): 0,0015 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- EC50 (Navicula pelliculosa (Freshwater diatom)): 0,00129 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 201
- NOEC (Skeletonema costatum (marine diatom)): 0,00068 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- M-Factor (Acute aquatic toxicity) : 100
- Toxicity to microorganisms : EC20 (activated sludge): 7,3 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
- Toxicity to fish (Chronic toxicity) : NOEC: 0,022 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 210
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,002 mg/l
Exposure time: 21 d
Species: Daphnia (water flea)
Method: OECD Test Guideline 211
- M-Factor (Chronic aquatic toxicity) : 100
- Ecotoxicology Assessment**
Acute aquatic toxicity : Very toxic to aquatic life.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version
4.0

Revision Date:
29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

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

12.2 Persistence and degradability

Product:

Biodegradability : Test Type: DOC measuring
Biodegradation: > 70 %
Method: OECD 302 B (elimination)
Remarks: Argument by analogy
The product is "inherently biodegradable" according to the criteria of the OECD.

Physico-chemical removability : Remarks: Can be eliminated from water by precipitation.

Components:

2,2'-oxybisethanol:

Biodegradability : Test Type: DOC measuring
Result: Readily biodegradable.
Biodegradation: 90 - 100 %
Exposure time: 28 d
Method: OECD 301 A (elimination)

Aryl ethylphenyl polyglycol ether:

Biodegradability : Result: Not readily biodegradable.

2-methyl-2H-isothiazol-3-one:

Biodegradability : Test Type: CO₂ measuring
Biodegradation: 47,6 - 55,8 %
Exposure time: 29 d
Method: OECD 301 B (mineralisation)

1,2-benzisothiazol-3(2H)-one:

Biodegradability : Result: rapidly degradable

mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Biodegradability : Test Type: O₂ measuring
Result: Readily biodegradable.
Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD 301 D (mineralisation)
Remarks: The product is "readily biodegradable" according to the criteria of the OECD.

Remarks: The 10 day time window criterion is not fulfilled.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version
4.0

Revision Date:
29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

2-octyl-2H-isothiazol-3-one:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 309

Inoculum: Marine water
Result: Readily biodegradable.
Method: OECD Test Guideline 309

Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: > 83 %
Method: OECD 303A (elimination)

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data is available on the product itself.

Components:

2,2'-oxybisethanol:

Partition coefficient: n-
octanol/water : log Pow: -1,98 (20 °C)

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Partition coefficient: n-
octanol/water : log Pow: 6,98 (21,7 °C)

2-methyl-2H-isothiazol-3-one:

Bioaccumulation : Bioconcentration factor (BCF): 5,75

Partition coefficient: n-
octanol/water : log Pow: 0,486 (20 °C)
Method: OECD Test Guideline 117

1,2-benzisothiazol-3(2H)-one:

Partition coefficient: n-
octanol/water : log Pow: 0,70 (20 °C)

mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Partition coefficient: n-
octanol/water : log Pow: 0,75
Remarks: Active ingredient

2-octyl-2H-isothiazol-3-one:

Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.

Partition coefficient: n- : log Pow: 2,92

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

octanol/water

Method: OECD Test Guideline 117

12.4 Mobility in soil

Product:

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..

Components:

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Assessment : This substance is considered to be persistent, bioaccumulating and toxic (PBT)..
: This substance is considered to be very persistent and very bioaccumulating (vPvB)..

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

Product:

Adsorbed organic bound halogens (AOX) : Remarks: The product does not increase the AOX-value of the waste water.
Additional ecological information : According to our knowledge, the product does not contain heavy metals and other compounds of EC directive 2000/60 EC.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Pay attention to local or official regulations.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

Contaminated packaging : Pay attention to local or official regulations.

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

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks : see chapter 6 - 8

14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable

SECTION 15: Regulatory information

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

Other regulations:

National and local regulations must be observed.

15.2 Chemical safety assessment

not required

SECTION 16: Other information

Full text of H-Statements

H226 : Flammable liquid and vapour.
H301 : Toxic if swallowed.
H302 : Harmful if swallowed.
H310 : Fatal in contact with skin.
H311 : Toxic in contact with skin.
H314 : Causes severe skin burns and eye damage.
H315 : Causes skin irritation.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version 4.0
Revision Date: 29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.
H330	: Fatal if inhaled.
H361f	: Suspected of damaging fertility.
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.
EUH071	: Corrosive to the respiratory tract.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Dam.	: Serious eye damage
Flam. Liq.	: Flammable liquids
Repr.	: Reproductive toxicity
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - 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 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



TUBIPERL SILVER FF

Version
4.0

Revision Date:
29.07.2022

Date of last issue: 19.12.2019
Date of first issue: 27.05.2016

Further information

Training advice : Based on the information in the safety data sheet and the workplace conditions, employees must be regularly trained in the safe handling of the product. National rules for training employees in handling hazardous substances must be observed.

Other information : The classification for dangerous physico-chemical properties, health and environmental hazards has been derived from a combination of computational methods and, if available, test data.

This data sheet contains changes from the previous version in section(s):

2
3
8
11
12
15
16

Sources of key data used to compile the Safety Data Sheet : Information from our suppliers, as well as data from the "Registered substances database" of the European Chemicals Agency (ECHA) has been used to compile this safety data sheet.

Classification of the mixture:

Skin Sens. 1 H317
Aquatic Chronic 3 H412

Classification procedure:

Calculation method
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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