SAFETY DATA SHEET

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

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

1.1 Product identifier

Product name:
SILIKOPON® EF

REACH Registration No.: -

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

Identified uses: Industrial use

Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet

Company Name	:	Evonik Operations GmbH Rellinghauser Str. 1-11 45128 Essen Germany
Telephone	:	+49 201 173 01
Fax	:	+49 201 173 3000
E-mail	:	productsafety-cs@evonik.com

1.4 Emergency telephone number:

24-Hour Health Emergency	:	+49 2365 49 2232 +49 2365 49 4423 (Fax)

National Poison Information Service (NPIS)
England, Scotland and Wales: NHS: 111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

Health Hazards

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

Environmental Hazards

Chronic hazards to the aquatic environment	Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label Elements

Signal Words: Warning

Hazard Statement(s):
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/vapors/spray.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash it before reuse.

2.3 Other hazards

Contains epoxy-containing compounds. Observe manufacturer's instructions.

SECTION 3: Composition/information on ingredients

3.1 Substances

REACH Registration No.: -

Chemical name	Concentration	CAS-No.	EC No.	UK-REACH Registration No.	REACH Registration No.	M-Factor:	Notes
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	10 - <20%	30583-72-3	500-070-7		01-2119959495-22	No data available.	
octamethylcyclotetrasiloxane	0.01 - <0.1%	556-67-2	209-136-7		01-2119529238-36	Aquatic Toxicity (Chronic): 10	##

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by

volume.
This substance has workplace exposure limit(s).
This substance is listed as SVHC.

Classification

Chemical name	Classification	Notes
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Classification: Skin Sens.: 1: H317; Aquatic Chronic: 3: H412; Supplemental label information: None known.	None.
octamethylcyclotetrasiloxane	Classification: Flam. Liq.: 3: H226; Repr.: 2: H361f; Aquatic Chronic: 1: H410; Supplemental label information: None known.	None.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Remove soiled or soaked clothing immediately

Inhalation: fresh air supply, consult a doctor if feeling unwell.

Skin Contact: In case of contact with skin wash off immediately with soap and water In case of discomfort: Supply with medical care.

Eye contact: In case of contact with eyes rinse thoroughly with water. In case of discomfort: Supply with medical care.

Ingestion: Thoroughly clean the mouth with water In case of discomfort: Supply with medical care.

Personal Protection for First-aid Responders: No data available.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: Up to now no symptoms are known.

Hazards: No data available.

4.3 Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: foam, carbon dioxide, dry powder, water spray.

Unsuitable extinguishing media: High volume water jet.

5.2 Special hazards arising from the substance or mixture:	In the event of fire the following can be released: - Carbon monoxide, carbon dioxide, silicon dioxide Under certain conditions of combustion traces of other toxic substances cannot be excluded

5.3 Advice for firefighters

Special fire fighting procedures:	No specific precautions.
Special protective equipment for fire-fighters:	Do not inhale explosion and/or combustion gases. Self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment.
6.1.1 For non-emergency personnel:	No data available.
6.1.2 For emergency responders:	No data available.
6.2 Environmental Precautions:	Do not allow to enter drains or waterways Prevent product from getting into subsoil/soil.
6.3 Methods and material for containment and cleaning up:	Take up with absorbent material (eg sand, kieselguhr, universal binder) Dispose of absorbed material in accordance with the regulations.
6.4 Reference to other sections:	For further information on exposure monitoring and disposal see sections 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures:	No data available.
Local/Total ventilation:	No data available.
Safe handling advice:	Avoid contact with skin and eyes. Do not inhale gases/vapours/aerosols.Provide good ventilation of working area (local exhaust ventilation if necessary). Use respiratory protection during spraying.
Contact avoidance measures:	No data available.

7.2 Conditions for safe storage, including any incompatibilities

Safe storage conditions:	Keep container tightly closed in a cool, well-ventilated place.
Safe packaging materials:	No data available.
7.3 Specific end use(s):	No further recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters
Occupational Exposure Limits

None of the components have assigned exposure limits.

Biological Limit Values

No biological exposure limits noted for the ingredient(s).

DNEL-Values

Remarks: DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Workers	Dermal	Systemic, short-term; 1 mg/kg	Repeated dose toxicity
	General population	Inhalation	Systemic, long-term; 1.76 mg/m3	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 3.25 mg/m3	Repeated dose toxicity
	General population	Inhalation	Systemic, short-term; 1.76 mg/m3	Repeated dose toxicity
	Workers	Inhalation	Systemic, short-term; 3.52 mg/m3	Repeated dose toxicity
	General population	Dermal	Systemic, short-term; 0.5 mg/kg	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 0.5 mg/kg	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 0.5 mg/kg	Repeated dose toxicity
	Workers	Dermal	Local, long-term; 21 µg/cm2	Skin Sensitisation
	General population	Dermal	Local, short-term; 21 µg/cm2	Skin Sensitisation
	Workers	Dermal	Local, short-term; 0.23 mg/cm2	Skin Sensitisation
	Workers	Dermal	Systemic, long-term; 1 mg/kg	Acute toxicity
	General population	Dermal	Local, long-term; 21 µg/cm2	Skin Sensitisation
	Workers	Eyes	Local effect;	No hazard identified
	General population	Eyes	Local effect;	No hazard identified
octamethylcyclotetrasiloxane	General population	Inhalation	Systemic, long-term; 13 mg/m3	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 73 mg/m3	Repeated dose toxicity
	Workers	Inhalation	Local, long-term; 73 mg/m3	Repeated dose toxicity
	General population	Inhalation	Local, long-term; 13 mg/m3	Repeated dose toxicity
	Workers	Eyes	Local effect;	No hazard identified
	General population	Eyes	Local effect;	No hazard identified
	General population	Oral	Systemic, long-term; 3.7 mg/kg	Repeated dose toxicity

PNEC-Values

Remarks: PNEC-Values

Critical component	Environmental compartment	PNEC-Values	Remarks
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Aquatic (freshwater)	11.5 µg/l	
	Aquatic (marine water)	1.15 µg/l	
	Soil	0.099 mg/kg	
	Sediment (marine water)	0.023 mg/kg	
	Sediment (freshwater)	0.229 mg/kg	
	Sewage treatment plant	100 mg/l	
octamethylcyclotetrasiloxane	Predator	41 mg/kg	Oral
	Soil	0.54 mg/kg	
	Sediment (freshwater)	3 mg/kg	
	Aquatic (freshwater)	1.5 µg/l	
	Aquatic (marine water)	0.15 µg/l	

	Sewage treatment plant	10 mg/l	
	Sediment (marine water)	0.3 mg/kg	

8.2 Exposure controls

Appropriate Engineering Controls: No data available.

Individual protection measures, such as personal protective equipment

Eye/face protection: Safety goggles

Hand Protection: Additional Information: gloves made of nitril (NBR), gloves made of butyl (IIR)

Skin and Body Protection: protective clothing

Respiratory Protection: in case of formation of vapours/aerosols: Short term: filter apparatus, combination filter A-P2

Hygiene measures: Wash hands before breaks and immediately after handling the product. Remove soiled or soaked clothing immediately. When using do not eat, drink or smoke. Use skin protective preparation as preventive skin protection.

Environmental Controls: The environmental regulations on the control and monitoring of environmental exposures are to be observed.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state: liquid

Form: liquid

Color: Pale yellow

Odor: Characteristic

Odor Threshold: not measured

Freezing point: not measured

Boiling Point: not measured

Flammability: not measured

Upper/lower limit on flammability or explosive limits

Explosive limit - upper: not measured

Explosive limit - lower: not measured

Flash Point: 117 °C
Method: DIN EN 22719

Auto-ignition temperature: not measured

Decomposition Temperature: not measured

pH: Not applicable

Viscosity

Dynamic viscosity: 1,000 - 2,000 mPa.s at 25 °C
Method: DIN 53015

Kinematic viscosity: 833 - 1667 mm2/s at 25 °C ,
Method: calculated

Solubility(ies)

Solubility in Water:	Insoluble
Solubility (other):	not measured
Partition coefficient (n-octanol/water):	not measured
Vapor pressure:	not measured
Relative density:	not measured
Density:	1.0 - 1.2 g/cm3 at 25 °C Method: DIN 51757
Relative vapor density:	not measured

9.2 Other information

Explosive properties:	not measured
Oxidizing properties:	not oxidizing
Self-ignition:	not measured
Metal Corrosion:	Not corrosive to metals
Evaporation Rate:	not measured

SECTION 10: Stability and reactivity

10.1	**Reactivity:**	see section "Possibility of hazardous reactions".
10.2	**Chemical Stability:**	The product is stable under normal conditions.
10.3	**Possibility of hazardous reactions:**	Hydrolysis may result in formation of methanol depending on the specific conditions of use.
10.4	**Conditions to avoid:**	None with proper storage and handling.
10.5	**Incompatible Materials:**	Not known.
10.6	**Hazardous Decomposition Products:**	None with proper storage and handling.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Inhalation:	Information on effects are given below.
Skin Contact:	Information on effects are given below.
Eye contact:	Information on effects are given below.
Ingestion:	Information on effects are given below.

Acute toxicity (list all possible routes of exposure)

Oral

Product:	LD 50, ATEmix, > 5,000 mg/kg
Components:	
4,4'-	LD 50, Rat, Female, > 2,000 mg/kg, OECD 425

Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	
octamethylcyclotetrasiloxane	LD 50, Rat, Male, > 5,000 mg/kg, OECD 401

Dermal

Product:	LD 50, ATEmix, > 5,000 mg/kg
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	LD 50, Rat, Female, Male, > 2,000 mg/kg, OECD 402 Not toxic after single exposure, No classification
octamethylcyclotetrasiloxane	LD 50, Rat, Female, Male, > 5,000 mg/kg, OECD 402

Inhalation

Product:	LC 50, ATEmix, 4 h, > 40 mg/l, Vapour
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Vapour, Not toxic after single exposure, No data available. Dust and mist, Not toxic after single exposure, No data available.
octamethylcyclotetrasiloxane	LC 50, Rat, Female, Male, 4 h, 36 mg/l, OECD 403, Vapour Not toxic after single exposure, Dust and mist, No data available.

Repeated dose toxicity

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	NOAEC, Rat, Female, Male, Inhalation, Vapour, 5 days/weeks, 6 hours/day, 1.8 mg/l, Subchronic toxicity LOAEC, Rat, Female, Male, Inhalation, Vapour, 5 days/weeks, 6 hours/day, 8.5 mg/l, chronic NOAEC, Rat, Female, Male, Inhalation, Vapour, 5 days/weeks, 6 hours/day, 0.36 mg/l, Subacute toxicity

Skin Corrosion/Irritation

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Not irritating, OECD 404, Rabbit
octamethylcyclotetrasiloxane	Not irritating, OECD 404, Rabbit

Serious Eye Damage/Eye Irritation

Product:	No data available.
Components:	

4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Not irritating, OECD 405, Rabbit
octamethylcyclotetrasiloxane	Not irritating, OECD 405, Rabbit

Respiratory or Skin Sensitization

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Local Lymph Node Assay (LLNA), OECD 429, Mouse, May cause sensitization by skin contact.
octamethylcyclotetrasiloxane	Magnussona i Kligmana., OECD 406, Rabbit, Not a skin sensitizer. Sensitization test, Human, Not a skin sensitizer. Maximization Test, OECD 406, Guinea Pig, Not a skin sensitizer.

Carcinogenicity

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	No data available.

Germ Cell Mutagenicity

No data available.

In vitro

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ames test, OECD 471: , negative
octamethylcyclotetrasiloxane	Ames test, OECD 471: , negative Chromosomal aberration, OECD 473: , negative gene mutation test, OECD 476: , negative

In vivo

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	Micronucleus test, OECD 474, Inhalation - vapor, Rat, negative Chromosomal aberration, OECD 478, Oral, Rat, negative Chromosomal aberration, OECD 475, Inhalation - vapor, Rat, Female, Male, negative

Reproductive toxicity

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	Suspected of damaging fertility or the unborn child. Suspected of damaging fertility.

Specific Target Organ Toxicity - Single Exposure

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	No data available.

Aspiration Hazard

Product:	Not classified
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Not classified
octamethylcyclotetrasiloxane	Not classified

11.2 Information on other hazards

Other information

Product:	No data available.

SECTION 12: Ecological information

12.1 Toxicity:

Acute hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	LC 50, Oncorhynchus mykiss, 96 h, Approximate, 11.5 mg/l OECD 203
octamethylcyclotetrasiloxane	LC 50, Oncorhynchus mykiss, 96 h, > 22 µg/l US-EPA-method NOEC, Oncorhynchus mykiss, 96 h, 22 µg/l US-EPA-method

Aquatic Invertebrates

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	EC 50, Daphnia magna, 48 h, 18.3 mg/l OECD 202 NOEC, Daphnia magna, 48 h, 10 mg/l OECD 202
octamethylcyclotetrasiloxane	NOEC, Daphnia magna, 48 h, 15 µg/l US-EPA-method EC 50, Daphnia magna, 48 h, > 15 µg/l US-EPA-method

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): > 100 mg/l (OECD 201)
octamethylcyclotetrasiloxane	EC 50 (Algae (Pseudokirchneriella subcapitata), 96 h): > 22 µg/l (US-EPA-method) EC 50 (Algae (Pseudokirchneriella subcapitata), 96 h): > 22 µg/l (US-EPA-method)

Toxicity to microorganisms

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	EC 50, activated sludge, 3 h, > 1,000 mg/l, OECD 209
octamethylcyclotetrasiloxane	No data available.

Toxicity to soil dwelling organisms

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	No data available.

Toxicity to terrestrial organisms

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	No data available.

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	NOEC, Oncorhynchus mykiss, 96 d, 7.5 mg/l
octamethylcyclotetrasiloxane	NOEC, Oncorhynchus mykiss, 93 d, 4.4 µg/l, US-EPA-method

Aquatic Invertebrates

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	NOEC, Daphnia magna, 48 d, 10 mg/l
octamethylcyclotetrasiloxane	NOEC, Daphnia magna, 21 d, 15 µg/l, EPA OTS 797.1330 Lowest Observed Effect Concentration, Daphnia magna, 21 d, 15 µg/l, EPA OTS 797.1330 EC 50, Daphnia magna, 21 d, > 15 µg/l, EPA OTS 797.1330

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	NOEC (Algae (Pseudokirchneriella subcapitata), 72 h): > 100 mg/l (OECD 201)
octamethylcyclotetrasiloxane	NOEC (Algae (Pseudokirchneriella subcapitata), 96 h): < 22 µg/l (US-EPA-method)

Toxicity to microorganisms

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	EC 50, activated sludge, 3 h, > 1,000 mg/l, OECD 209
octamethylcyclotetrasiloxane	No data available.

Toxicity to soil dwelling organisms

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	No data available.

Toxicity to terrestrial organisms

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	No data available.

12.2 Persistence and Degradability

Biodegradation

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	0 %, 28 d, OECD 301 D, The product is not biodegradable., aerobic
octamethylcyclotetrasiloxane	3.7 %, 28 d, OECD 310, The product is not biodegradable., aerobic

12.3 Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	No data available.

Partition Coefficient n-octanol / water (log Kow)

Product:	not measured
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	3.84
octamethylcyclotetrasiloxane	6.488, 25.1 °C, OECD 123

12.4 Mobility in soil:

Product	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	No data available.

12.5 Results of PBT and vPvB assessment:

Product	No data available.
Components:	
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No data available.
octamethylcyclotetrasiloxane	PBT: persistent, bioaccumulative and toxic substance. vPvB: very persistent and very bioaccumulative substance.

12.6 Other adverse effects:

Other hazards

Product:	Do not allow to enter soil, waterways or waste water canal.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information:	No data available.
Disposal methods:	In accordance with local authority regulations, take to special waste incineration plant
Contaminated Packaging:	If empty contaminated containers are recycled or disposed of, the receiver must be informed about possible hazards.

SECTION 14: Transport information

14.1 UN/ID No.

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

Not applicable

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:

EU Regulations

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I: Not applicable

15.2 Chemical safety assessment: No chemical safety assessment was carried out for this product.

International regulations

Montreal protocol
Not applicable

Stockholm convention
Not applicable

Rotterdam convention
Not applicable

Kyoto protocol
Not applicable

SECTION 16: Other information

Abbreviations and acronyms:

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 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; EIGA - European Industrial Gases Association; 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

Key literature references and sources for data: No data available.

Training information: Comply with national laws regulating employee instruction.

Revision Information Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Disclaimer: This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.