

Version: 2.4 Issue Date: 07.02.2019 Last revised date: 30.11.2023

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# 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: AEROSIL® E 812** 

Additional identification

Chemical name: Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica

Chemical formula:

INDEX No. 014-052-00-7 CAS-No. 68909-20-6 EC No. 272-697-1

**UK-REACH** UK-01-2509930461-7-0035 (TPR)

**Registration No.:** 

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

Identified uses: For industrial use

Uses advised against: Not determined.

# 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 6181 59 4787 E-mail : sds-hu@evonik.com

### 1.4 Emergency telephone number:

24-Hour Health : +49 7623 919191

Emergency

000005045710

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

### SECTION 2: Hazards identification

# 2.1 Classification of the substance or mixture

GB

The product has not been classified as hazardous according to the legislation in force.

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

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Not classified

2.2 Label Elements Not applicable

2.3 Other hazards

#### PBT/vPvB data

Not a PBT, vPvB substance as per the criteria of the REACH Regulation.

# SECTION 3: Composition/information on ingredients

3.1 Substances

**Chemical name:** Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with

silica

INDEX No.:014-052-00-7CAS-No.:68909-20-6EC No.:272-697-1

**UK-REACH Registration No.:** UK-01-2509930461-7-0035 (TPR)

### **REACH Registration No.:**

Chemical name	Concentrati on	CAS-No.	EC No.		REACH Registration No.	M-Factor:	Notes
Silicon dioxide, chemically prepared (CAS 112945-52- 5 resp. 7631-86-9)		112945-52- 5	231-545-4	UK-01- 250993046 1-7	01- 211937949 9-16	No data available.	#

<sup>\*</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

# Classification

Chemical name	Classification	Notes
Silicon dioxide, chemically	Classification: None known.	Not
prepared (CAS 112945-		applicabl
52-5 resp. 7631-86-9)	Supplemental label information: None known.	е

# SECTION 4: First aid measures

<sup>#</sup> This substance has workplace exposure limit(s).

<sup>##</sup> This substance is listed as SVHC.



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### 4.1 Description of first aid measures

General information: Pay attention to self-protection. Remove victims from hazardous

area. Immediately remove soiled or soaked clothing and remove it to a safe distance. Keep victim warm, in a stabilized position and covered. Do not leave the victim unattended. Place patients who are unconscious but breathing in the stabilized lateral

position.

**In case product dust is released: Possible discomfort: cough,** 

sneezing Move to fresh air.

**Skin Contact:** Wash off with plenty of water and soap.

**Eye contact:** Possible discomfort is due to foreign substance effect. Rinse

thoroughly with plenty of water keeping eyelid open. In case of

persistent discomfort: Consult an ophthalmologist.

**Ingestion:** Clean mouth with water and drink afterwards plenty of water.

After absorbing large amounts of substance / 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: None known.

Hazards: None known.

4.3 Indication of immediate medical attention and special treatment needed

**Treatment:** No data available.

#### SECTION 5: Firefighting measures

# 5.1 Extinguishing media

Suitable extinguishing media: Water spray, foam, CO2, dry powder. Adapt fire-

extinguishing measures to surroundings

Unsuitable extinguishing media: Do not use full-force water jet in order to avoid dispersal and

spread of the fire.

5.2 Special hazards arising from the

substance or mixture:

May be released in case of fire: carbon monoxide, carbon

dioxide, organic products of decomposition.

5.3 Advice for firefighters

**Special fire fighting procedures:** Water used to extinguish fire should not enter drainage

systems, soil or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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



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### **SECTION 6: Accidental release measures**

6.1 Personal precautions, protective

equipment and emergency procedures:

Use personal protective equipment. Avoid dust formation.

**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 entrance in sewage water, soil stretches of

water, groundwater, drainage systems.

6.3 Methods and material for containment and

cleaning up:

Sweep up or vacuum up spillage and collect in suitable

container for disposal.

**6.4 Reference to other sections:** For personal protection see section 8. For disposal

considerations see section 13.

# SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

**Technical measures:** Ensure suitable suction/aeration at the work place and with

operationalmachinery.Local ventilation if necessary.

**Local/Total ventilation:**No data available.

Safe handling advice: If necessary: Local ventilation. Handle in accordance with

good industrial hygiene and safety practice. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be

used.

Contact avoidance measures: No data available.

# 7.2 Conditions for safe storage, including any incompatibilities

Safe storage conditions: Take precautionary measures against static

discharges. Keep in a dry place.

Safe packaging materials: No data available.

7.3 Specific end use(s): Applications; see Section 1. No further information available

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

### 8.1 Control Parameters

# **Occupational Exposure Limits**

Chemical name	Туре	Form of exposure	Exposure Limit Values	Source
Silicon dioxide, chemically prepared (CAS 112945-52-5 resp. 7631-86-9)	TWA	Inhalable dust.	6 mg/m3	EH40 WEL (12 2011)
	TWA	Respirabl e dust.	2.4 mg/m3	EH40 WEL (12 2011)



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Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

### **Biological Limit Values**

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

8.2 Exposure controls

Appropriate Engineering Controls: Ensure suitable suction/aeration at the work place and with

operationalmachinery.Local ventilation if necessary, see

also section 7.

Individual protection measures, such as personal protective equipment

**Eye/face protection:** Safety glasses with side shields If dust occurs: basket-

shaped glasses

Hand Protection: Additional Information: Wear protective gloves made of the

following materials: material, rubber, leather.

Additional Information: The data about break through time/strength of material is not valid for undissolved

solids/dust.

Skin and Body Protection: No special protective equipment required. Preventive skin

protection

**Respiratory Protection:** No special protective equipment required. If dust occurs:

Dust mask with P2 particle filter

**Hygiene measures:** When using, do not eat, drink or smoke. Wash face and/or

hands before break and end of work. To ensure ideal skin protection: use super fatted soaps and skin cream for skin

care. Wash contaminated clothing before reuse.

**Environmental Controls:** see section 6.

### SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Appearance** 

Physical state: solid
Form: Powder
Color: White
Odor: Odorless

Odor Threshold: Not applicable

Melting Point:Not applicable DecompositionBoiling Point:Not applicable Decomposition

Flammability: Not applicable

Upper/lower limit on flammability or explosive limits

Explosive limit - upper: No data available.

Explosive limit - lower: No data available.

Flash Point: Not applicable (solid)

Auto-ignition temperature:  $> 400 \, ^{\circ}\text{C}$ Decomposition Temperature:  $> 300 \, ^{\circ}\text{C}$ 



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**pH:** 5.5 - 7.5 at 20 °C

Concentration: 40 g/l 1: 1 in suspension

**Viscosity** 

**Dynamic viscosity:** Not applicable (solid) **Kinematic viscosity:** Not applicable (solid)

Solubility(ies)

Solubility in Water: hardly soluble

Partition coefficient (n-octanol/water): Not applicable

Vapor pressure: Not applicable

Relative density: No data available.

Density: Approximate

2 g/cm3 at 20 °C

Vapor density (air=1): No data available.

9.2 Other information

Explosive properties: Not to be expected in view of the structure

Oxidizing properties: Not to be expected in view of the structure

Self-ignition:

Peroxides:

Not applicable

Not applicable

Not dust explosive

Evaporation Rate:

Not applicable

Minimum ignition energy: > 10 kJ

**SECTION 10: Stability and reactivity** 

**10.1** Reactivity: No dangerous reaction known under conditions of normal

use.

**10.2 Chemical Stability:** Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions: No hazardous reactions are known if properly handled

and stored.

**10.4** Conditions to avoid: Hydrophobic properties disappear at temperatures >

300°C

**10.5** Incompatible Materials: None known.

**10.6** Hazardous Decomposition Carbon Monoxide. Carbon Dioxide. organic products of

decomposition Stable under normal conditions. Product

will not undergo hazardous polymerization.

SECTION 11: Toxicological information

**Products:** 

**General information:** Silicosis or other product specific illnesses of the respiratory tract were

not observed in association with the product.



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### 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, Rat, Female, Male, > 5,000 mg/kg, OECD 401, (analogy)

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

Components:

Silicon dioxide, LD 50, Rat, Female, Male, > 5,000 mg/kg, OECD 401

chemically prepared (CAS 112945-52-5 resp.

7631-86-9)

**Dermal** 

**Product:** LD 50, Rabbit, > 5,000 mg/kg, (analogy)

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

Components:

Silicon dioxide, LD 50, Rabbit, > 5,000 mg/kg

chemically prepared (CAS 112945-52-5 resp.

7631-86-9)

Inhalation

**Product:** LC 50, Rat, Female, Male, 4 h, > 5.01 mg/l, OECD 436, Dust and mist,

(analogy)

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

Components:

Silicon dioxide, LC 50, Rat, Female, Male, 4 h, > 5.01 mg/l, Dust and mist, OECD 436

chemically prepared Vapour, Not toxic after single exposure, Not applicable

(CAS 112945-52-5 resp. 7631-86-9)

Repeated dose toxicity

Product: NOAEL Rat, Male, Oral, 28 day, 7 days a week, >= 1,000 mg/kg, No

negative effects. (analogy)

Components:

Silicon dioxide, NOAEL Rat, Male, Oral, 28 day, 7 days a week, >= 1,000 mg/kg, No

chemically prepared negative effects. (CAS 112945-52-5 resp.

7631-86-9)

**Skin Corrosion/Irritation** 

**Product:** OECD 404, (Rabbit), Not irritating, (analogy)

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

Components:

Silicon dioxide, chemically Not irritating, OECD 404, Rabbit

prepared (CAS 112945-52-5 resp. 7631-86-9)

# Serious Eye Damage/Eye Irritation



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**Product:** analogous OECD method, Rabbit, Not irritating, (analogy) Based on available data, the classification criteria are not met.

Components:

Silicon dioxide, chemically Not irritating, analogous OECD method, Rabbit prepared (CAS 112945-

52-5 resp. 7631-86-9)

**Respiratory or Skin Sensitization** 

Product: Local Lymph Node Assay (LLNA), OECD 429, Mouse, Not a skin

sensitizer., (analogy)

Maximization Test, OECD 406, Guinea Pig, Not a skin sensitizer.,

(analogy)

Components:

Silicon dioxide, chemically Local Lymph Node Assay (LLNA), OECD 429, Mouse, Not a skin

prepared (CAS 112945- sensitizer.

52-5 resp. 7631-86-9) Maximization Test, OECD 406, Guinea Pig, Not a skin sensitizer.

Carcinogenicity

**Product:** No evidence that cancer may be caused.

Components:

Silicon dioxide, chemically No evidence that cancer may be caused.

prepared (CAS 112945-52-5 resp. 7631-86-9)

**Germ Cell Mutagenicity** 

no evidence of mutagenic effects

In vitro

**Product:** gene mutation test, OECD 471: , negative, (analogy)

gene mutation test, OECD 490: , negative, (analogy)

Chromosomal aberration, OECD 473: , negative, (analogy)

Components:

Silicon dioxide, chemically gene mutation test, OECD 471: , negative prepared (CAS 112945- gene mutation test, OECD 490: , negative

52-5 resp. 7631-86-9) Chromosomal aberration, OECD 473: , negative

In vivo

**Product:** Chromosomal aberration, OECD 475, Oral, Rat, Male, negative,

(analogy)

Components:

Silicon dioxide, chemically Chromosomal aberration, OECD 475, Oral, Rat, Male, negative

prepared (CAS 112945-52-5 resp. 7631-86-9)

Reproductive toxicity

**Product:** no evidence of reproductiontoxic properties

Components:

Silicon dioxide, chemically no evidence of reproductiontoxic properties

prepared (CAS 112945-52-5 resp. 7631-86-9)

**Specific Target Organ Toxicity - Single Exposure** 

**Product:** no evidence for hazardous properties

Components:

Silicon dioxide, chemically no evidence for hazardous properties

prepared (CAS 112945-52-5 resp. 7631-86-9)

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### **Specific Target Organ Toxicity - Repeated Exposure**

**Product:** no evidence for hazardous properties

#### Components:

Silicon dioxide, chemically no evidence for hazardous properties prepared (CAS 112945-52-5 resp. 7631-86-9)

### **Aspiration Hazard**

Product: Not applicable

Components:

Silicon dioxide, chemically Not applicable prepared (CAS 112945-52-5 resp. 7631-86-9)

#### 11.2 Information on other hazards

Other information

**Product:** Based on available data, the classification criteria are not met.;

#### **SECTION 12: Ecological information**

#### 12.1 Toxicity:

#### Acute hazards to the aquatic environment:

**Fish** 

Product: LC 50, (Brachydanio rerio), 96 h, > 10,000 mg/l OECD 203, The reported

toxic effects relate to the nominal concentration. (analogy)

Components:

Silicon dioxide, chemically prepared

LC 50, (Brachydanio rerio), 96 h, > 10,000 mg/l OECD 203, The reported

toxic effects relate to the nominal concentration.

(CAS 112945-52-5 resp. 7631-86-9)

Aquatic Invertebrates

Product: EC 50, Daphnia magna, 24 h, > 1,000 mg/l OECD 202, The reported

toxic effects relate to the nominal concentration. (analogy)

Components:

Silicon dioxide, chemically prepared (CAS 112945-52-5 resp. EC 50, Daphnia magna, 24 h, > 1,000 mg/l OECD 202, The reported

toxic effects relate to the nominal concentration.

7631-86-9)

**Toxicity to Aquatic Plants** 

**Product:** EC 50 (Desmodesmus subspicatus (green algae), 72 h): > 173 mg/l

(OECD 201) (analogy)

Components:

7631-86-9)

Silicon dioxide, chemically prepared (CAS 112945-52-5 resp. EC 50 (Desmodesmus subspicatus (green algae), 72 h): > 173 mg/l

ed (OECD 201)

Toxicity to microorganisms

Product: EC 50, local activated sludge, 3 h, > 2,500 mg/l, OECD 209, (analogy)

Components:

Silicon dioxide, EC 50, local activated sludge, 3 h, > 2,500 mg/l, OECD 209

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chemically prepared (CAS 112945-52-5 resp. Version: 2.4 Issue Date: 07.02.2019

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# Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Components:

Silicon dioxide, No data available.

chemically prepared (CAS 112945-52-5 resp.

7631-86-9)

**Aquatic Invertebrates** 

Product: No data available.

Components:

Silicon dioxide, No data available.

chemically prepared (CAS 112945-52-5 resp.

7631-86-9)

**Toxicity to Aquatic Plants** 

Product: No data available.

Components:

No data available. Silicon dioxide.

chemically prepared (CAS 112945-52-5 resp.

7631-86-9)

Toxicity to microorganisms

**Product:** EC 50, local activated sludge, 3 h, > 2,500 mg/l, OECD 209, (analogy)

Components:

EC 50, local activated sludge, 3 h, > 2,500 mg/l, OECD 209 Silicon dioxide,

chemically prepared (CAS 112945-52-5 resp.

7631-86-9)

# 12.2 Persistence and Degradability

### **Biodegradation**

**Product:** The methods designed to assess persistence and biodegradability are

not applicable to this product, in analogy to inorganic substances.

Components:

Silicon dioxide, chemically The methods for determining biodegradability are not applicable to prepared (CAS 112945-52-5 resp. 7631-86-9)

inorganic substances.

# 12.3 Bioaccumulative potential

# **Bioconcentration Factor (BCF)**

**Product:** Not to be expected.

Components:

Silicon dioxide, chemically Not to be expected.

prepared (CAS 112945-52-5 resp. 7631-86-9)



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# Partition Coefficient n-octanol / water (log Kow)

Product: Not applicable

Components:

Silicon dioxide, chemically, Not applicable prepared (CAS 112945-52-5 resp. 7631-86-9)

### 12.4 Mobility in soil:

**Product** No remarkable mobility in soil is to be expected.

Components:

Silicon dioxide, chemically No remarkable mobility in soil is to be expected. prepared (CAS 112945-52-5

resp. 7631-86-9)

#### 12.5 Results of PBT and vPvB assessment:

**Product** Not a PBT, vPvB substance as per the criteria of the REACH Regulation.

Components:

Silicon dioxide, chemically No data available.

prepared (CAS 112945-52-5

resp. 7631-86-9)

#### 12.6 Other adverse effects:

Other hazards

**Product:** The data we have at our disposal do not necessitate identification

concerning environmental hazard.

# **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

General information: No data available.

**Disposal methods:** Review all local, state and federal regulations concerning

health and pollution for appropriate disposal procedures. No waste key number as per the European Waste Types List can be assigned to this product, since such classification is based on the (as yet undetermined) use to which the

product is put by the consumer. The waste key number must be determined as per the European Waste Types List

(decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm / producing firm / official

authority.

**Contaminated Packaging:** Offer rinsed packaging material to local recycling facilities.

Other countries: observe the national regulations.

### **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

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### 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. REACH Annex XIV, Substances Subject to Authorization: None present or none present in regulated quantities.
- EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC): None present or none present in regulated quantities.
- EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), as amended: None present or none present in regulated quantities.

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled **Substances:** None present or none present in regulated quantities.

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex II, New Substances: None present or none present in regulated quantities.

UK EXP1: UK. GB PIC List, Regulation (EU) 649/2012 as amended by EU Exit Regulations S.I. 2019/720 and S.I. 2020/1567, as amended: None present or none present in regulated quantities.

UK EXP2: UK. GB PIC List, Regulation (EU) 649/2012 as amended by EU Exit Regulations S.I. 2019/720 and S.I. 2020/1567, as amended: None present or none present in regulated quantities.

UK EXP3: UK. GB PIC List, Regulation (EU) 649/2012 as amended by EU Exit Regulations S.I. 2019/720 and S.I. 2020/1567, as amended: None present or none present in regulated quantities.

UK BAN: UK. GB PIC List, Regulation (EU) 649/2012 as amended by EU Exit Regulations S.I. 2019/720 and S.I. 2020/1567, as amended: None present or none present in regulated quantities.

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

15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out for this substance.

### International regulations

#### Montreal protocol

Not applicable



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#### Stockholm convention

Not applicable

#### **Rotterdam convention**

Not applicable

### **Kyoto protocol**

Not applicable

#### **SECTION 16: Other information**

#### Abbreviations and acronyms:

EH40 WEL: UK. EH40 Workplace Exposure Limits (WELs), as amended

EH40 WEL / TWA: Time Weighted Average (TWA):

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

#### Notes:

Not	Not applicable
applicable	

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

**Training information:** No data available.



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**Revision Information** Changes since the last version are highlighted in the margin. This version

Disclaimer:

replaces all previous versions.

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.