SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended by Commission Regulation (EU) 2020/878

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

1.1 Product identifier

Product name:
ACEMATT® OK 412
(Packed as Q-Coat Sealer
Matting Additive)

Assessment Nanomaterial/Nanoform: This substance/ mixture contains nanoforms (as per the REACH Regulation).

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

Identified uses: Matting agents

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 Emergency	:	+49 7623 919191

Malta Competition and Consumer Affairs Authority (MCCAA), emergency 112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification according to Regulation (EC) No 1272/2008 as amended.

Not classified

2.2 Label Elements

Not applicable

2.3 Other hazards

PBT/vPvB data
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.

Endocrine disrupting properties-Toxicity
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.

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)		112926-00-8	231-545-4	01-2119379499-16;	No data available.	
Polyethylene		9002-88-4		-;	No data available.	

* 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
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	Classification**:** None known. Supplemental label information**:** None known. Specific concentration limit: None known. Acute toxicity, oral**:** LD 50**:** > 5,000 mg/kg Acute toxicity, inhalation**:** LC 50**:** > 5.01 mg/l Dust and mist Acute toxicity, dermal**:** LD 50**:** > 5,000 mg/kg	Not applicable
Polyethylene	Classification**:** None known. Supplemental label information**:** None known.	Not applicable

	Specific concentration limit: None known. Acute toxicity, oral**:** LD 50**:** > 2,000 mg/kg Acute toxicity, inhalation**:** None known. Acute toxicity, dermal**:** None known.	

CLP: Regulation No. 1272/2008.
The full text for all H-statements is displayed in section 16.

Assessment Nanomaterial/Nanoform: This substance/ mixture contains nanoforms (as per the REACH Regulation).

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation: 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 hazards which require special first aid measures.

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 a solid water stream as it may scatter and spread 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 fire-fighters:	In the event of fire, wear 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 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

None of the components have assigned exposure limits.

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, plastics.
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 Decomposition
Boiling Point:	Not applicable Decomposition
Flammability:	No data available.

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:	480 °C Method: VDI 2263
Decomposition Temperature:	> 230 °C
pH:	Approximate 6 (20 °C) Concentration: 50 g/l Suspension
Viscosity	
Dynamic viscosity:	Not applicable (solid)
Kinematic viscosity:	Not applicable (solid)
Solubility(ies)	
Solubility in Water:	hardly soluble
Dissolution Rate:	low dissolution kinetics
Partition coefficient (n-octanol/water):	Not applicable
Dispersion Stability:	Assessment: low dispersion stability
Vapor pressure:	Not applicable
Relative density:	No data available.
Density:	Approximate 1.9 g/cm3 (20 °C)
Vapor density (air=1):	Not applicable
Particle characteristics	
Particle Size:	See comment under the next heading.
Particle Size Distribution:	The structure of Evonik synthetic amorphous silica (SAS) can be characterized by constituent particles, which are covalently bound together to aggregates. Due to the covalent bonding there are no phase boundaries between the constituent particles, they have lost their physical identity and thus can be regarded as primary structures only. Aggregates further combine more loosely to agglomerates. The agglomerates are the particles that can be found in the product as it is brought to the market. Size of primary structures: Primary structures can be measured by TEM only. The size for Evonik SAS is in the range of 2.5 – 50 nm (d50, number based). As explained above these do not occur as isolated particles.
Dustiness:	Avoid dust formation.
Specific surface area:	No data available.
Surface charge/Zeta potential:	No data available.
Assessment:	Assessment: This substance/ mixture contains nanoforms (as per the REACH Regulation).
Shape:	Shape: spheroidal
Crystallinity:	Crystallinity: amorphous
Surface treatment:	Surface treatment /Coatings: No

9.2 Other information

Pyrophoric properties:	> 170 °C Method: UN method N.4 100 mm sample cube
Peroxides:	Not applicable
Dust explosion properties:	Not dust explosive
Evaporation Rate:	Not applicable
Minimum ignition energy:	Not applicable

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:**	None known.
10.5	**Incompatible Materials:**	None known.
10.6	**Hazardous Decomposition Products:**	organic products of decomposition Stable under normal conditions. Product will not undergo hazardous polymerization.

SECTION 11: Toxicological information

General information: Silicosis or other product specific illnesses of the respiratory tract were not observed in association with the product.

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:	Not classified for acute toxicity based on available data.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	LD 50, Rat, Female, Male, > 5,000 mg/kg, OECD 401
Polyethylene	LD 50, Rat, > 2,000 mg/kg Not toxic after single exposure, No classification

Dermal

Product:	Not classified for acute toxicity based on available data.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	LD 50, Rabbit, > 5,000 mg/kg
Polyethylene	Not toxic after single exposure, No data available.

Inhalation

Product:	Not classified for acute toxicity based on available data.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	LC 50, Rat, Female, Male, 4 h, > 5.01 mg/l, Dust and mist, OECD 436 Vapour, Not toxic after single exposure, Not applicable
Polyethylene	Vapour, Not toxic after single exposure, Not applicable Dust and mist, Not toxic after single exposure, No data available.

Repeated dose toxicity

Product:	no evidence for hazardous properties
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	NOAEL Rat, Male, Oral, 28 day, 7 days a week, >= 1,000 mg/kg, No negative effects.
Polyethylene	No data available.

Skin Corrosion/Irritation

Product:	Based on available data, the classification criteria are not met.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	Not irritating, OECD 404, Rabbit
Polyethylene	No data available.

Serious Eye Damage/Eye Irritation

Product:	Based on available data, the classification criteria are not met.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	Not irritating, analogous OECD method, Rabbit
Polyethylene	No data available.

Respiratory or Skin Sensitization

Product:	No data available.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	Local Lymph Node Assay (LLNA), OECD 429, Mouse, Not a skin sensitizer. Maximization Test, OECD 406, Guinea Pig, Not a skin sensitizer.
Polyethylene	No data available.

Carcinogenicity

Product:	No evidence that cancer may be caused.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	No evidence that cancer may be caused.
Polyethylene	An Expert Judgment stated that no classification is necessary based on present knowledge.

Germ Cell Mutagenicity
no evidence of mutagenic effects

In vitro

Product:	No data available.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	gene mutation test, OECD 471: , negative gene mutation test, OECD 490: , negative Chromosomal aberration, OECD 473: , negative
Polyethylene	No data available.

In vivo

Product:	No data available.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	Chromosomal aberration, OECD 475, Oral, Rat, Male, negative
Polyethylene	No data available.

Reproductive toxicity

Product:	no evidence of reproductiontoxic properties
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	no evidence of reproductiontoxic properties
Polyethylene	No data available.

Specific Target Organ Toxicity - Single Exposure

Product:	No data available.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	no evidence for hazardous properties
Polyethylene	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	no evidence for hazardous properties
Polyethylene	No data available.

Aspiration Hazard

Product:	No data available.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	Not applicable
Polyethylene	Not applicable

11.2 Information on other hazards

Endocrine disrupting properties

Product:	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.;

Components:

Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	No data available.
Polyethylene	No data available.

Other information

Product: No toxicological tests are available on the product.; An Expert Judgment stated that no classification is necessary based on present knowledge.;

SECTION 12: Ecological information

12.1 Toxicity:

Acute hazards to the aquatic environment:

Fish

Product: LC 50, Brachydanio rerio (zebrafish), 96 h, > 10,000 mg/l OECD 203, The reported toxic effects relate to the nominal concentration. tested substance: Silicon dioxide, derived from chemical synthesis

Components:

Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	LC 50, (Brachydanio rerio), 96 h, > 10,000 mg/l OECD 203, The reported toxic effects relate to the nominal concentration.
Polyethylene	LC 50, Leuciscus idus, 96 h, > 100 mg/l

Aquatic Invertebrates

Product: EC 50, Daphnia magna, 24 h, > 1,000 mg/l OECD 202, The reported toxic effects relate to the nominal concentration. tested substance: Silicon dioxide, derived from chemical synthesis

Components:

Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	EC 50, Daphnia magna, 24 h, > 1,000 mg/l OECD 202, The reported toxic effects relate to the nominal concentration.
Polyethylene	No data available.

Toxicity to Aquatic Plants

Product: No data available.

Components:

Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	EC 50 (Desmodesmus subspicatus (green algae), 72 h): > 173 mg/l (OECD 201)
Polyethylene	No data available.

Toxicity to microorganisms

Product: No data available.

Components:

Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	EC 50, local activated sludge, 3 h, > 2,500 mg/l, OECD 209
Polyethylene	No data available.

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	No data available.
Polyethylene	No data available.

Aquatic Invertebrates

Product:	No data available.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	No data available.
Polyethylene	No data available.

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	No data available.
Polyethylene	No data available.

Toxicity to microorganisms

Product:	No data available.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	EC 50, local activated sludge, 3 h, > 2,500 mg/l, OECD 209
Polyethylene	No data available.

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 prepared (CAS 112926-00-8 resp. 7631-86-9)	The methods for determining biodegradability are not applicable to inorganic substances.
Polyethylene	No data available.

12.3 Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	No data available.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	Not to be expected.
Polyethylene	No data available.

Partition Coefficient n-octanol / water (log Kow)

Product:	Not applicable
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	, Not applicable
Polyethylene	No data available.

12.4 Mobility in soil:

Product	No data available.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	No remarkable mobility in soil is to be expected.
Polyethylene	No data available.

12.5 Results of PBT and vPvB assessment:

Product	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:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	Non-classified vPvB substance, Non-classified PBT substance
Polyethylene	Non-classified vPvB substance, Non-classified PBT substance

12.6 Endocrine disrupting properties:

Product:	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.
Components:	
Silicon dioxide, chemically prepared (CAS 112926-00-8 resp. 7631-86-9)	No data available.
Polyethylene	No data available.

12.7 Other adverse effects:

Other hazards

Product:	An Expert Judgment stated that no classification is necessary based on present knowledge.
Additional Information:	No ecotoxicological data is available for this product.

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

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

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled Substances: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex II, New Substances: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

EU. REACH Annex XIV, Substances Subject to Authorization: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), as amended: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC): None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

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

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work: None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

15.2 Chemical safety assessment: No chemical safety assessment is required 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

Notes:

Not applicable	Not applicable

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

Wording of the H-statements in section 2 and 3

: none

Training information: No data available.

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.