

EU - Safety Data Sheet

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878

SILADENT

Revision date: 15.10.2024

Version 1.11

Page 1 of 10
Printing date: 07.04.2025

Expansion liquid type 140

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

1.1. Product identifier

Identification of the substance or preparation:

Commercial product name:

Expansion liquid type 140

This substance/ mixture contains nanoforms (according to REACH Regulation)

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

Use of the Substance/Mixture

Inorganic binder, surface modifier and flocculating agent.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Street / mailbox:

Country code. / postal code / city:

Phone:

Fax:

E-mail / Website:

Further information obtainable from:

SILADENT Dr. Böhme & Schöps GmbH

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SILADENT Dr. Böhme & Schöps GmbH

1.4 Emergency telephone number

SILADENT Dr. Böhme & Schöps GmbH:

+49 (0) 53 21 / 37 79 - 0 (Mon-Fri. 8 a.m. - 4 p.m.)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008):

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008):

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature:

Amorphous Silica, aqueous colloidal solution.

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Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Substances with a workplace exposure limit:			
Silicon dioxide, amorphous	7631-86-9 231-545-4 01-2119379499-16		>= 40 - < 50

For explanation of abbreviations see section 16.

Remarks:

Substances with a workplace exposure limit

This substance/ mixture contains nanoforms (according to REACH Regulation)

Components:

Silicon dioxide, amorphous:

Particle characteristics

Particle size:

Particle Size Distribution:

Assessment:

Further particle properties for nanomaterials see section 9

Further particle properties for nanomaterials see section 9

This substance/ mixture contains nanoforms (according to REACH Regulation)

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:

No hazards which require special first aid measures.

If inhaled:

If breathed in, move person into fresh air. If symptoms persist, call a physician.

In case of skin contact:

Remove contaminated clothing and shoes. Rinse with water.

In case of eye contact:

Rinse with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.

If swallowed:

Clean mouth with water and drink afterwards plenty of water.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed:

Symptoms:

No information available.

Risks:

No information available.

4.3 Indication of any immediate medical attention and special treatment needed:

Treatment:

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Suitable extinguishing agents:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards during firefighting:

No hazards to be specially mentioned.

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Specific hazards arising from the chemical combustion products: No hazardous combustion products are known.

5.3 Advice for firefighters

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

Further information: Standard procedure for chemical fires.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: No conditions to be specially mentioned.
Follow safe handling advice and personal protective equipment recommendations.

6.2 Environmental precautions: No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up: Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal.
If liquid has been spilt in large quantities clean up promptly by scoop or vacuum.

6.4 Reference to other sections

Additional advice: For disposal considerations see section 13.
For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: For personal protection, see section 8.
No special handling advice required.

Information about fire- and explosion protection: Normal measures for preventive fire protection.

Hygiene measures: General industrial hygiene practice.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Keep container tightly closed in a dry and well-ventilated place. Keep away from direct sunlight.

Further information on storage conditions: Do not freeze. May cause mild eye and skin irritation. Skin contact may cause dehydration. In case of spill or leak: Flush with water. Keep away from direct sunlight.
Maximum storage duration 18 months

Advice on common storage: No special restrictions on storage with other products.

Storage class (TRGS 510): 12

Further information on storage stability: No decomposition if stored and applied as directed.

Minimum storage temperature: Avoid temperatures below: 5 °C

Maximum storage temperature: 50 °C

7.3 Specific end use(s): No information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters:

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Silicon dioxide, amorphous	7631-86-9	AGW (Inhalable fraction)	4 mg/m ³ (Silica)	DE TRGS 900
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		MAK (measured as the alveolate fraction)	0,3 mg/m ³	DE DFG MAK
	Further information: Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			
		MAK (measured as the alveolate fraction)	0,02 mg/m ³	DE DFG MAK
	Peak-limit: excursion factor (category): 8; II			
	Further information: Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			

8.2 Exposure controls:

Engineering Controls:

Effective exhaust ventilation system.

Personal protective equipment

Eye/face protection:

Safety glasses

Hand protection

Material:

PVC

Material:

Rubber gloves

Respiratory protection:

No personal respiratory protective equipment normally required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	liquid
Colour:	white
Odour:	odourless
Odour threshold:	No data available.
Melting point / Melting range:	0°C
Boiling point / Boiling range:	100°C
Flammability:	Not applicable
Upper explosion limit / Upper flammability limit:	Not applicable
Lower explosion limit / Lower flammability limit:	Not applicable
Flash point:	Not applicable
Auto-ignition temperature:	Not applicable
Decomposition temperature:	No data available
ph:	9 - 11
Viscosity	
Viscosity, dynamic:	< 20 mPa.s (20 °C)
Viscosity, kinematic:	No data available
Solubility(ies)	
Water solubility:	dispersible
Solubility in other solvents:	No data available

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Partition coefficient: n- octanol/water:	Not applicable
Vapour pressure:	ca. 23 hPa (20 °C)
Relative density:	1,200 - 1,400
Relative vapour density:	No data available
Particle characteristics: Assessment	This substance/ mixture contains nanoforms (according to REACH Regulation)
Particle size:	1 - 100 nm Method: ISO 22412 Further particle properties for nanomaterials see section 3
Particle Size Distribution:	D50 = 23 nm ± 7 nm Measurement method: ISO 22412
Shape:	Shape: spheres
9.2 Other information	
Explosives:	Not explosive
Oxidizing properties:	Not classified as oxidising.
Flammability (liquids):	The product is not flammable.
Self-ignition:	Not applicable
Evaporation rate:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity:	Stable under normal conditions.
10.2 Chemical stability:	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions:	No dangerous reaction known under conditions of normal use.
10.4 Conditions to avoid:	Avoid drying out of the solution as this can lead to a build up of dust.
10.5 Incompatible materials: Materials to avoid:	Copper Mild steel Aluminium
10.6 Hazardous decomposition products:	No hazardous decomposition products are known.
Thermal decomposition:	No data available.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008	
Acute toxicity:	Not classified due to lack of data.
Product:	
Acute oral toxicity:	LD50 (Rat): > 5.000 mg/kg Remarks: The value is estimated from tests on similar products.
Components:	
Silicon dioxide, amorphous:	
Acute oral toxicity:	LD50 (Rat): > 10.000 mg/kg

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Skin corrosion/irritation:	Not classified due to lack of data.
Serious eye damage/eye irritation:	Not classified due to lack of data.
Skin sensitisation:	Based on available data, the classification criteria are not met.
Respiratory sensitisation:	Based on available data, the classification criteria are not met.
Product:	
Method:	(Magnusson-Kligman):
Result:	Did not cause sensitisation on laboratory animals.
Remarks:	The value is estimated from tests on similar products.
Germ cell mutagenicity:	Not Not classified due to lack of data.
Product:	
Genotoxicity in vitro:	Test Type: Ames test Method: OECD Test Guideline 471 Result: negative Remarks: The value is estimated from tests on similar products.
Carcinogenicity:	Not classified due to lack of data.
Reproductive toxicity:	Not classified due to lack of data.
STOT - single exposure:	Not classified due to lack of data.
STOT - repeated exposure:	Not classified due to lack of data.
Aspiration hazard:	Not classified due to lack of data.

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.

Further information

Product:

Remarks:

No further data available.

Information given is based on data on the components and the toxicology of similar products.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish:

LC50 (Danio rerio (zebra fish)): > 5.000 mg/l Exposure time: 96 h

Remarks: The value is estimated from tests on similar products.

Toxicity to daphnia and other aquatic invertebrates:

EC50 (Ceriodaphnia dubia (water flea)): 7.600 mg/l Exposure time: 48 h

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Toxicity to algae/aquatic plants:

Remarks: The value is estimated from tests on similar products.

NOEC (*Selenastrum capricornutum* (green algae)): 60 mg/l
Exposure time: 48 h

Remarks: The value is estimated from tests on similar products.

EC50 (*Selenastrum capricornutum* (green algae)): 120 mg/l
Exposure time: 48 h

Remarks: The value is estimated from tests on similar products.

EC10 (*Selenastrum capricornutum* (green algae)): 140 mg/l
Exposure time: 48 h

Remarks: The value is estimated from tests on similar products.

12.2 Persistence and degradability

Biodegradability:

Result: Not applicable

Remarks: inorganic

Biochemical Oxygen Demand (BOD):

Remarks: No data available

12.3 Bioaccumulative potential

Product:

Bioaccumulation:

Remarks: No bioaccumulation is expected.

12.4 Mobility in soil

Product:

Mobility:

Remarks: No test results, under extreme circumstances, transport from earth to water may take place.

Distribution among
environmental compartments:

Remarks: Transport to air is not expected.

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.

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:

Additional ecological information:

None known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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Contaminated packaging:

Empty remaining contents.
Empty containers should be taken to an approved waste
handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number or ID number:

ADN:	Not regulated as a dangerous good
ADR:	Not regulated as a dangerous good
RID:	Not regulated as a dangerous good
IMDG:	Not regulated as a dangerous good
IATA_P:	Not regulated as a dangerous good

14.2 UN proper shipping name:

ADN:	Not regulated as a dangerous good
ADR:	Not regulated as a dangerous good
RID:	Not regulated as a dangerous good
IMDG:	Not regulated as a dangerous good
IATA_P:	Not regulated as a dangerous good

14.3 Transport hazardous class:

ADN:	Not regulated as a dangerous good
ADR:	Not regulated as a dangerous good
RID:	Not regulated as a dangerous good
IMDG:	Not regulated as a dangerous good
IATA_P:	Not regulated as a dangerous good

14.4 Packing group:

ADN:	Not regulated as a dangerous good
ADR:	Not regulated as a dangerous good
RID:	Not regulated as a dangerous good
IMDG:	Not regulated as a dangerous good
IATA_P:	Not regulated as a dangerous good

14.5 Environmental hazards:

Not regulated as a dangerous good.

14.6 Special precautions for user:

Remarks:	Not classified as dangerous in the meaning of transport regulations.
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14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII):	Not applicable
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REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59):	Not applicable
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Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:	Not applicable
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Regulation (EU) 2019/1021 on persistent organic pollutants (recast):	Not applicable
Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV):	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances:	Not applicable
Water hazard class (Germany):	nwg not water endangering Classification according to AwSV, Annex (2.2)
TA Luft List (Germany):	5.2.1: Total dust: Not applicable 5.2.2: Inorganic substances in powdered form: Not applicable 5.2.4: Inorganic substances in gaseous form: Not applicable 5.2.5: Organic Substances: Not applicable 5.2.7.1.1: Carcinogenic substance: Not applicable 5.2.7.1.1: Quartz fine dust PM4: Not applicable 5.2.7.1.1: Formaldehyde: Not applicable 5.2.7.1.1: fibres: Not applicable 5.2.7.1.2: Germ cell mutagens: Not applicable 5.2.7.1.3: Substances toxic to reproduction: Not applicable 5.2.7.2: Poorly degradable, easily enrichable and highly toxic organic substances: Not applicable

The components of this product are reported in the following inventories:

TSCI:	On the inventory, or in compliance with the inventory
TSCA:	All substances listed as active on the TSCA inventory
AIIIC:	On the inventory, or in compliance with the inventory
DSL:	All components of this product are on the Canadian DSL
ENCS:	On the inventory, or in compliance with the inventory
ISHL:	On the inventory, or in compliance with the inventory
Keco:	On the inventory, or in compliance with the inventory
PICCS:	On the inventory, or in compliance with the inventory
IECSC:	On the inventory, or in compliance with the inventory
NZIoC:	On the inventory, or in compliance with the inventory
TECI:	On the inventory, or in compliance with the inventory

15.2 Chemical Safety Assessment:

Product information:	not required
Silicon dioxide, amorphous:	A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of H-Statements

Full text of other abbreviations

DE DFG MAK:

Germany. MAK BAT Annex IIa

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DE TRGS 900:

DE DFG MAK / MAK:

DE TRGS 900 / AGW:

Germany. TRGS 900 - Occupational exposure limit values.

MAK value

Time Weighted Average

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; 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 Cooperation 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; TECl - 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

Further information:

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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.