

according to Regulation (EC) No. 1907/2006 Revision date: 11.11.2022 Version 1.9

Expansion liquid type 140

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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

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.

This substance/ mixture contains nanoforms

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

SILADENT Dr. Böhme & Schöps GmbH

Street / mailbox: Im Klei 26

DE - 38644 Goslar

Country code. / postal code / city:

+49 (0) 53 21 / 37 79 - 0

Phone: Fax:

+49 (0) 53 21 / 37 79 - 0

E-mail / Website:

info@siladent.de / www.siladent.de

Further information obtainable from: 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):

Not a hazardous substance or mixture.

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.

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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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For explanation of abbreviations see section 16.

Remarks: Substances with a workplace exposure limit

This substance/ mixture contains nanoforms

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 Assessment: This substance/ mixture contains nanoforms

based on: Measurement data

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 eve.

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 of

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



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

SECTION 8: Exposure controls/personal protection

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/m3 (Silica)	DE TRGS 900	
			When there is compliance with the OEL and biological tolerance values, there is			

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

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 100°C **Boiling point / Boiling range:**

Flammability: Not applicable **Upper explosion limit / Upper flammability** Not applicable limit:

Lower explosion limit / Lower flammability

limit:

Not applicable

Flash point: Not applicable Auto-ignition temperature: Not applicable **Decomposition temperature:** No data available

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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 Partition coefficient: n- octanol/water: Not applicable Vapour pressure: ca. 23 hPa (20 °C) Relative density: 1.200 - 1.400 No data available Relative vapour density:

Particle characteristics:

Assessment Assessment: This substance/ mixture contains nanoforms



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Particle size: 1 - 100 nm

Particle Size Distribution: Method: ISO 22412 D50 = $23 \text{ nm} \pm 7 \text{ nm}$

Measurement method: ISO 22412

Shape: Shape: spheres

9.2 Other information

Explosives: Not explosive

Oxidizing properties:

Flammability (liquids):

Not classified as oxidising.

The product is not flammable.

Self-ignition:Evaporation rate:
Not applicable
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 based on available information.

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

Skin corrosion/irritation: Not classified based on available information.

Serious eye damage/eye irritation:Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

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 classified based on available information.



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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 based on available information.

Reproductive toxicity:Not classified based on available information.

STOT - single exposure: Not classified based on available information.

STOT - repeated exposure: Not classified based on available information.

Aspiration hazard: Not classified based on available information.

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

Remarks: 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

Remarks: The value is estimated from tests on similar

products.

Toxicity to algae/aquatic plants: 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/I Exposure time: 48 h

Remarks: The value is estimated from tests on similar

products.



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Biodegradability:

12.2 Persistence and degradability Result: Not applicable Remarks: inorganic

Result: Not applicable

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

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:

ADR:

Not regulated as a dangerous good IATA_P:

Not regulated as a dangerous good Not regulated as a

14.2 UN proper shipping name: Not regulated as a dangerous good.

ADN:

Not regulated as a dangerous good
ADR:

Not regulated as a dangerous good
RID:

Not regulated as a dangerous good



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IMDG:

IATA P:

Not regulated as a dangerous good Not regulated as a dangerous good

14.3 Transport hazardous class: Not regulated as a dangerous good.

ADN: Not regulated as a dangerous good ADR: Not regulated as a dangerous good Not regulated as a dangerous good RID: IMDG: Not regulated as a dangerous good IATA P: Not regulated as a dangerous good

14.4 Packing group: Not regulated as a dangerous good.

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 Not regulated as a dangerous good IATA_P:

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.

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

REACH - Candidate List of Substances of Very

High Concern for Authorisation (Article 59):

Regulation (EC) No 1005/2009 on substances

that deplete the ozone layer:

Not applicable

Not applicable

Regulation (EC) 850/2004 on persistent organic

pollutants:

Not applicable

Regulation (EC) No 850/2004 on persistent

organic pollutants:

Not applicable

Regulation (EC) No 649/2012 of the European Parliament and Council concerning the export

and import of dangerous chemicals:

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



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Water hazard class (Germany): nwg not water endangering

Classification according to AwSV, Annex (2.2)

TA Luft List (Germany): Total dust: Not applicable

Inorganic substances in powdered form: Not applicable Inorganic substances in vapour or gaseous form: Not

applicable

Organic Substances: Not applicable Carcinogenic substances: Not applicable

Mutagenic: Not applicable

Toxic to reproduction: 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 AIIC: On the inventory, or in compliance with the inventory All components of this product are on the Canadian DSL DSL: **ENCS**: On the inventory, or in compliance with the inventory ISHL: On the inventory, or in compliance with the inventory 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:

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 other abbreviations

DE TRGS 900: Germany. TRGS 900 - Occupational exposure limit values

DE TRGS 900 / AGW : Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO -International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic



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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; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

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.