SAFETY DATA SHEET

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

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

1.1 Product identifier

Product name: SilForce* SS4300C

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

Identified uses: Paper release product Crosslinking Agent

Uses advised against: Not known.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Importer/Distributor Information	:	Momentive Performance Materials GmbH Chempark Leverkusen Gebaeude V7 DE - 51368 Leverkusen Germany
Contact person	:	commercial.services@momentive.com
Telephone	:	General information +390510924300 (Customer Service Centre)
1.4 Emergency telephone number	:	Europe, Israel & All other: +44 (0) 1235239670; Middle East:+44 (0) 1235239671

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

The product is not classified for chronic aquatic toxicity, for further details see section 16

2.2 Label Elements Not applicable

Additional Information: No data available.

2.3 Other hazards

PBT/vPvB data
Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB)

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

Chemical nature: Methylhydrogenpolysiloxane

3.2 Mixtures

General information: No data available.

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
Octamethylcyclotetrasiloxane	0,01 - <=0,1%	556-67-2	209-136-7	01-2119529238-36-XXXX	Aquatic Toxicity (Chronic): 10	PBT, vPvB

* 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).
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.

Classification

Chemical name	Classification	Notes
Octamethylcyclotetrasiloxane	Flam. Liq.: 3: H226; Repr.: 2: H361f; Aquatic Chronic: 1: H410;	

CLP: Regulation No. 1272/2008.

SECTION 4: First aid measures

General: No action shall be taken involving any personal risk or without suitable training.

4.1 Description of first aid measures

Inhalation: Move to fresh air. Get medical attention if any discomfort continues.

Eye contact: Rinse immediately with plenty of water. Get medical attention if symptoms occur.

Skin Contact: After contact with skin, remove product mechanically. Wash with soap and water. Get medical attention if symptoms occur.

Ingestion: Do NOT induce vomiting. If conscious, drink plenty of water. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed: None known.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards: This product is not expected to produce adverse effects under normal conditions of use and appropriate personal hygiene.

Treatment: If swallowed, do NOT induce vomiting. Give a glass of water.

SECTION 5: Firefighting measures

General Fire Hazards: Use standard firefighting procedures and consider the hazards of other involved materials.

5.1 Extinguishing media

Suitable extinguishing media: Carbon Dioxide. Alcohol resistant foam. Water fog.

Unsuitable extinguishing media: Avoid water in straight hose stream; will scatter and spread fire.

5.2 Special hazards arising from the substance or mixture: Reacts with water or alcohol in presence of acids or bases to release hydrogen (flammable gas). Use water spray to keep fire-exposed containers cool. Vapours may form explosive mixture with air. Vapors may travel considerable distance to a source of ignition and flash back. Ground container and transfer equipment to eliminate static electric sparks.

5.3 Advice for firefighters

Special fire-fighting procedures: Product may charge electrostatically during pouring or filling. The formation of small amounts of hydrogen gas is possible at room temperature. This hydrogen gas formation will increase with rising temperatures. Keep away from sources of ignition - No smoking. Use only in well-ventilated areas. Use water spray to keep fire-exposed containers cool. Static discharge: material can accumulate static charges which may cause an incendiary electrical discharge.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus and protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Caution: Contaminated surfaces may be slippery. Use personal protective equipment.

6.2 Environmental Precautions: Do not allow runoff to sewer, waterway or ground.

6.3 Methods and material for containment and cleaning up: Collect spillage with granulates, sawdust, rags or other absorbent. Transfer to a container for disposal. Caution: Contaminated surfaces may be slippery.

6.4 Reference to other sections: Vapours may form explosive mixture with air. Remove sources of ignition. Prevent runoff from entering drains, sewers, or streams.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling: Pack only into unbreakable packing materials (no glass containers !) to avoid contact with substances mentioned in Section 10. Keep away from sources of ignition - No smoking. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Take precautionary measures against static discharges. Keep away from food, drink and animal feeding stuffs. Use only in well-ventilated areas.

Storage conditions: Keep away from sources of ignition - No smoking. Keep away from water, acids, alkalis, amines and alcohols.

7.2 Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a cool, well-ventilated place. Keep away from water, acids, alkalis, amines and alcohols. Contains Siloxane-Hydrogen compounds (SiH); store in a cool place away from direct sunlight Recommended storage temperature between 4°C and 10°C.

Storage Stability: Material is stable under normal conditions.

7.3 Specific end use(s): No data 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

None.

8.2 Exposure controls

Appropriate Engineering Controls: Provide adequate general and local exhaust ventilation. Eyewash bottle with clean water.

Individual protection measures, such as personal protective equipment

General information: When using do not eat, drink or smoke. Wash hands after contact. Practice good housekeeping. Avoid contact with skin and eyes. Use only in well-ventilated areas.

Eye/face protection: Safety glasses with side-shields conforming to EN166

Skin protection

Hand Protection: Advice: There is no risk to health due to contact with the chemical. Use hand protection to prevent mechanically injuries.

Other: Wear suitable protective clothing and eye/face protection.

Respiratory Protection: No protection is ordinarily required under normal conditions of use and with adequate ventilation.

Hygiene measures: Observe good industrial hygiene practices. Wash hands after handling. When using do not eat, drink or smoke. Avoid contact with skin and eyes. Keep container closed.

Environmental exposure controls: No release to wastewater from process as such, wastewater emissions limited to release generated from final equipment cleaning step using water

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Colorless
Odor:	Odorless
Odor Threshold:	No data available.
pH:	No data available.
Freezing point:	No data available.
Boiling Point:	> 260 °C (1,013 hPa)
Flash Point:	> 177 °C (PENSKY-MARTENS)
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%):	No data available.
Flammability Limit - Lower (%):	No data available.
Vapor pressure:	No data available.
Relative vapor density:	No data available.
Density:	ca. 1,00 g/cm3
Relative density:	1
Solubility(ies)	
Solubility in Water:	Insoluble
Solubility (other):	Insoluble
Partition coefficient (n-octanol/water) Log Pow:	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	Material is stable under normal conditions.
SADT:	No data available.
Viscosity, dynamic:	No data available.
Viscosity, kinematic:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

9.2 Other information

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity:	No data available.
10.2 Chemical Stability:	Material is stable under normal conditions.
10.3 Possibility of hazardous reactions:	Product generates flammable gas on contact with acids, bases or oxidizing substances. Hazardous polymerization does not occur.
10.4 Conditions to avoid:	Moisture. Keep away from sources of ignition - No smoking.
10.5 Incompatible Materials:	Evolves hydrogen on contact with acids, alkalis, alcohols, powdered metals or, as the case may be, metal oxides.

10.6 Hazardous Decomposition Products: Evolves hydrogen on contact with acids, alkalis, alcohols, powdered metals or, as the case may be, metal oxides. Hydrogen; Danger of formation of explosive hydrogen/air mixtures. Carbon oxides Oxides of silicon. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

SECTION 11: Toxicological information

General information: According to current knowledge, polydimethylsiloxanes are not physiologically a problem; but contact with eyes can cause short time, harmless, reversible blurred vision, due to the formation of an oil film on the eye.

Information on likely routes of exposure

Inhalation: No data available.

Ingestion: No data available.

Skin Contact: No data available.

Eye contact: No data available.

11.1 Information on toxicological effects

Acute toxicity

Oral

Product:	Not classified for acute toxicity based on available data.
Specified substance(s)	
Octamethylcyclotetrasiloxane	LD 50 (Rat): > 4.800 mg/kg

Dermal

Product:	Not classified for acute toxicity based on available data.
Specified substance(s)	
Octamethylcyclotetrasiloxane	LD 50 (Rat): > 2.375 mg/kg

Inhalation

Product:	Not classified for acute toxicity based on available data.
Specified substance(s)	
Octamethylcyclotetrasiloxane	LC50 (Rat, 4 h): 36 mg/l

Repeated dose toxicity

Product:	No data available.
Specified substance(s)	
Octamethylcyclotetrasiloxane	No data available.

Skin Corrosion/Irritation:	Not irritating
Product:	(Rabbit, 24 h): No skin irritation
Specified substance(s)	
Octamethylcyclotetrasiloxane	OECD Test Guideline 404 (Rabbit): Non irritating

Serious Eye Damage/Eye Irritation: Not irritating

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Product:	(Rabbit): No eye irritation
Specified substance(s)	
Octamethylcyclotetrasiloxane	OECD-Guideline 405 (Acute Eye Irritation/Corrosion) (Rabbit): Non irritating

Respiratory or Skin Sensitization:

Product:	Did not cause sensitization on laboratory animals. Magnusson-Kligmann (Guinea Pig): In tests with guinea-pigs, the product did not show a sensitising effect (OECD 406; GPMT according to Magnusson-Kligman).
Specified substance(s)	
Octamethylcyclotetrasiloxane	Maximisation Test, OECD-Guideline 406 (Skin Sensitisation) (Guinea Pig): Not sensitizing

Germ Cell Mutagenicity

In vitro

Product:	No data available.
Specified substance(s)	
Octamethylcyclotetrasiloxane	Ames-Test (OECD-Guideline 471 (Genetic Toxicology: Salmonella typhimurium, Reverse Mutation Assay)): negative (not mutagenic) Mouse Lymphoma Assay (OECD Guidline 476): negative (not mutagenic)

In vivo

Product:	No data available.
Specified substance(s)	
Octamethylcyclotetrasiloxane	Chromosomal aberration (OECD 475) Inhalation (Rat, male and female): negative Dominant lethal assay (OECD 478) Oral (Rat, male and female): negative

Carcinogenicity

Product:	No data available.
Specified substance(s)	
Octamethylcyclotetrasiloxane	No data available.

Reproductive toxicity

Product:	No data available.
Specified substance(s)	
Octamethylcyclotetrasiloxane	No data available.

Specific Target Organ Toxicity - Single Exposure

Product:	No data available.
Specified substance(s)	
Octamethylcyclotetrasiloxane	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.
Specified substance(s)	
Octamethylcyclotetrasiloxane	No data available.

Aspiration Hazard

Product: No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane	No data available.

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:

Octamethylcyclotetrasiloxane	No data available.

Other effects: No data available.

SECTION 12: Ecological information

12.1 Toxicity

Acute toxicity

Fish

Product: No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane	No toxicity at the limit of solubility ; LC50 (Oncorhynchus mykiss, 96 h): > 0,022 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane	No toxicity at the limit of solubility ; EC50 (Daphnia magna, 48 h): > 0,015 mg/l

Chronic Toxicity

Fish

Product: No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane	No toxicity at the limit of solubility ; NOEC (Oncorhynchus mykiss, 93 d): >= 0,0044 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane	No toxicity at the limit of solubility ; NOEC (Daphnia magna, 21 d): > 0,015 mg/l

Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s)

Octamethylcyclotetrasilox	No toxicity at the limit of solubility ; ErC50 (Selenastrum capricornutum, 96

ane	h): > 0,022 mg/l

12.2 Persistence and Degradability

Biodegradation

Product:	No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane	(29 d, 310 Ready Biodegradability - CO_2 in Sealed Vessels (Headspace Test)): 3,7 % Persistent Not readily biodegradable.

BOD/COD Ratio

Product	No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane	No data available.

12.3 Bioaccumulative potential

Product:	No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane	Bioconcentration Factor (BCF): 12.400

12.4 Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Octamethylcyclotetrasiloxane	No data available.

12.5 Results of PBT and vPvB assessment: Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB)

Octamethylcyclotetrasiloxane	Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB)	Octamethylcyclotetrasiloxane (D4) meets the current EU REACh Annex XIII criteria for PBT and vPvB and has been added to the candidate list for Substances of very high concern (SVHC)., *However our understanding of the available science is that D4 does not behave similarly to known PBT/vPvB substances. The silicones industries interpretation of the available data is that the weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by naturally occurring reactions in the atmosphere. Any D4 in air that does not degrade by these reactions is not expected to deposit from the air to water, to land, or to living organisms.*

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:	
Octamethylcyclotetrasiloxane	No data available.

12.7 Other adverse effects:

Other hazards
Product: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information: The generation of waste should be avoided or minimized wherever possible. See Section 8 for information on appropriate personal protective equipment. Do not discharge into drains, water courses or onto the ground.

Disposal methods: Can be incinerated when in compliance with local regulations.

SECTION 14: Transport information

ADR

Not regulated.

ADN

Not regulated.

RID

Not regulated.

IMDG

Not regulated.

IATA

Not regulated.

14.6 Special precautions for user: Protect from moisture. Keep away from food, foodstuff, acids and bases. This product is not prohibited for air shipment by national or international regulations on the transport of dangerous goods. However, as a result of the potential formation of hydrogen gas under certain conditions, Momentive Performance Materials recommends that this product should be shipped using a mode of transportation other than air (IATA-C, IATA-P).

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:

Not applicable

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

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex II, New Substances: none

EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), as amended: none

Regulation (EC) No. 649/2012 Import and export of dangerous chemicals: none

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended: none

EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC): none

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use: none

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: none

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.: none

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I: None present or none present in regulated quantities.

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants: none

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work: none

15.2 Chemical safety assessment: No Chemical Safety Assessment has been carried out.

Inventory Status

Australia AICS:	On or in compliance with the inventory	Remarks: None.
Canada DSL Inventory List:	On or in compliance with the inventory	Remarks: None.
Japan (ENCS) List:	On or in compliance with the inventory	Remarks: None.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory	Remarks: None.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory	Remarks: None.
Canada NDSL Inventory:	Not in compliance with the inventory.	Remarks: None.
Philippines PICCS:	On or in compliance with the inventory	Remarks: None.
US TSCA Inventory:	On or in compliance with the inventory	Remarks: Commercial Status: Active
New Zealand Inventory of Chemicals:	On or in compliance with the inventory	Remarks: None.
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory	Remarks: None.

REACH:	If purchased from Momentive Performance Materials GmbH in Leverkusen, Germany, all substances in this product have been registered by Momentive Performance Materials GmbH or upstream in our supply chain or are exempt from registration under Regulation (EC) No 1907/2006 (REACH). For polymers, this includes the constituent monomers and other reactants.	Remarks: None.

SECTION 16: Other information

Revision Information: Not relevant.

Key literature references and sources for data: The partition coefficient of D4 between PDMS and water has been determined as log KPDMS-water =7.09. It follows that PDMS containing up to 3%w/w D4 will generate a thermodynamic limit concentration of 2.4 µg D4/L in the water phase. The critical 21d-NOEC for daphnia of 7.9 µg D4/L will not be reached. The product is therefore not classified for chronic aquatic toxicity

Wording of the H-statements in section 2 and 3: none

Training information: No data available.

Issue Date: 29.06.2023

Disclaimer:

Notice to reader

Unless otherwise specified in section 1.2, Momentive Products are intended for industrial application only.
They are not intended for specific medical applications, neither for long-lasting (> 30 days) implantation into the human body, injected or directly ingested, nor for the manufacture of multiple usable contraceptives.

Further Information

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 asa guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warrantyor 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.