

Safety Data Sheet (1907/2006/EC)

Material: 60008374

SEMICOSIL® 989/1K

Version: 2.8 (GB)

Date of print: 26.10.2022

Date of last alteration: 02.06.2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Commercial product name: SEMICOSIL® 989/1K****1.2 Relevant identified uses of the substance or mixture and uses advised against**

Use of substance / preparation:

Industrial.

Adhesive / sealant

1.3 Details of the supplier of the safety data sheet

Manufacturer/distributor:

Wacker Chemie AG

Street/POB-No.:

Hanns-Seidel-Platz 4

State/postal code/city:

D 81737 München

Telephone:

+49 89 6279-0

Contact point:

Wacker Chemicals Ltd.

Street/POB-No.:

2 Arlington Square, Downshire Way

Postal code/city:

Bracknell RG12 1WA

Country:

United Kingdom

Telephone:

+44 1344 401 670

Information about the Safety Data Sheet:

Telephone

+49 8677 83-4888

eMail

WLCP-MSDS@wacker.com

1.4 Emergency telephone number

Emergency Information:

+44 1273 289451**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

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

Not a hazardous substance or mixture.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008:

No labeling according to GHS required.

Code	Additional Labelling
EUH210	Safety data sheet available on request.

2.3 Other hazards

Product can release hydrogen. Risk of hydrogen gas formation with water, alcohols, acids, metallic salts, amines and alkalis. In combination with oxygen, the released hydrogen can form oxyhydrogen. The product hydrolyses under formation of methanol (CAS-Nr. 67-56-1). Methanol is classified concerning both physical and health hazards. The hydrolysis rate and consequently the relevance for the hazard profile of the product is strongly dependent on the specific conditions.

SECTION 3: Composition/information on ingredients**3.1 Substances**

not applicable

3.2 Mixtures**3.2.1 Chemical characteristics**

Polydimethylsiloxane with functional groups and auxiliaries for addition cross-linking

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3.2.2 Hazardous ingredients

Type	CAS No.	EC-No. REACH no.	Substance	Content %	Classification according to Regulation (EC) No. 1272/2008*	Comment
INHA	2530-83-8	219-784-2 01-2119513212-58	(3-(2,3-Epoxypropoxy)propyl)trimethoxysilane	>=1 – <3	Eye Dam. 1; H318 Aquatic Chronic 3; H412	[1]

Type: INHA: ingredient, VERU: impurity

[1] = Hazardous or environmentally harmful substance; [2] = substance with a Community workplace exposure limit; [3] = PBT substance; [4] = vPvB substance

*Classification codes are explained in section 16.

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) in amounts above ≥ 0.1%.

SECTION 4: First aid measures**4.1 Description of first aid measures****General information:**

In case of accident or if you feel unwell seek medical advice (show label or SDS where possible).

After contact with the eyes:

Rinse immediately with plenty of water. Seek medical advice in case of continuous irritation.

After contact with the skin:

Wash with plenty of water or water and soap. In the event of a visible skin change or other complaints, seek medical advice (show label or SDS where possible).

After inhalation:

Provide fresh air.

After swallowing:

Give several small portions of water to drink. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Any relevant information can be found in other parts of this section.

4.3 Indication of any immediate medical attention and special treatment needed

Further toxicology information in section 11 must be observed.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media:**

Fires can be controlled with water spray, foam or carbon dioxide. Larger fires are best fought with alcohol-resistant aqueous film forming foam (AFFF-AR).

Extinguishing media which must not be used for safety reasons:

water jet , extinguishing powder , halones .

5.2 Special hazards arising from the substance or mixture

Risk of hazardous gasses or fumes in the event of fire. Exposure to combustion products may be a health hazard! Hazardous combustion products: toxic and very toxic fumes . With the use of water-based extinguishing agents care is required because hydrogen can be released, which accumulates after extinguishing the fire in poorly ventilated or confined areas and may refire or cause an explosion. Foam carpets may also include hydrogen or flammable vapors, which can lead to surface bursts. Remove sources of ignition during cleaning and absorbing.

5.3 Advice for firefighters**Special protective equipment for fire fighting:**

Use respiratory protection independent of recirculated air. Keep unprotected persons away.

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General information:

Fires involving SiH polysiloxane materials can be difficult to extinguish under certain circumstances.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Secure the area. Wear personal protection equipment (see section 8). Keep unprotected persons away. Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols. If material is released indicate risk of slipping. Do not walk through spilled material.

6.2 Environmental precautions

Prevent material from entering surface waters, drains or sewers and soil. Close leak if possible without risk. Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers. Inform authorities if substance leaks into surface waters, sewerage or ground.

6.3 Methods and material for containment and cleaning up

Scoop up large quantities after dusting surfaces with sand or Fuller's earth to prevent sticking. Sweep or scrape up the spilled material and place in an appropriate chemical waste container. Clean any slippery coating that remains using a detergent / soap solution or another biodegradable cleaner. Apply sand or other inert granular material to improve traction.

Further information:

Exhaust vapours. Eliminate all sources of ignition. Consider explosion protection. Material designated for disposal must be segregated from incompatible substances or materials specified in Sect. 10. Do not blend contaminated material with uncontaminated material. Do not seal collecting vessel gas-tight. Observe notes under section 7.

6.4 Reference to other sections

Relevant information in other sections has to be considered. This applies in particular for information given on personal protective equipment (section 8) and on disposal (section 13).

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Precautions for safe handling:**

Ensure adequate ventilation. Must be syphoned off in situ. Open and handle container with care. Keep container closed when not in use. Keep away from incompatible substances in accordance with section 10. Where possible, inert process equipment and blanket vessels, tanks and containers with nitrogen to reduce the available oxygen level. Contact WACKER for additional publications on the safe Handling of SiH Products. Observe information in section 8.

Precautions against fire and explosion:

Product can release hydrogen. Product can separate methanol. Flammable vapors may accumulate and form explosive mixtures with air in containers, process vessels, including partial, empty and uncleaned containers and vessels, or other enclosed spaces. Keep away from sources of ignition and do not smoke. Take precautionary measures against electrostatic charging. Cool endangered containers with water.

7.2 Conditions for safe storage, including any incompatibilities**Conditions for storage rooms and vessels:**

Do not store in virgin glass containers with basic surface. Observe local/state/federal regulations.

Advice for storage of incompatible materials:

Do not store with: basic substances (e.g. alkalis, ammonia, amines) , oxidizing agents , strong acids . Observe local/state/federal regulations.

Further information for storage:

Store in a dry and cool place. Protect against moisture. Store container in a well ventilated place.

Minimum temperature allowed during storage and transportation: 5 °C

Maximum temperature allowed during storage and transportation: 25 °C

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

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8.1 Control parameters**Maximum airborne concentrations at the workplace:**

Substance	Type	mg/m ³	ppm	Dust fract.	Fibre/m ³
Methanol	OEL	266,0	200,0		
Methanol	EU	260,0	200,0		

Derived No-Effect Level (DNEL):**(3-(2,3-Epoxypropoxy)propyl)trimethoxysilane**

Area of use:	Value:
Worker; dermal; systemic (long term)	10 mg/kg/day
Worker; by inhalation; systemic (long term)	70 mg/m ³
Consumer; oral; systemic (long term)	5 mg/kg/day
Consumer; dermal; systemic (long term)	5 mg/kg/day
Consumer; by inhalation; systemic (long term)	17 mg/m ³

Predicted No Effect Concentration (PNEC):**(3-(2,3-Epoxypropoxy)propyl)trimethoxysilane**

Area of use:	Value:
freshwater	0,45 mg/l
marine water	0,045 mg/l
Sediment	1,6 mg/kg dry mass
Soil	0,063 mg/kg dry mass
sewage treatment plant	8,2 mg/l

8.2 Exposure controls**8.2.1 Exposure in the work place limited and controlled****General protection and hygiene measures:**

Observe standard industrial hygiene practices for the handling of chemical substances. Do not inhale gases/vapours/aerosols. Use with adequate ventilation. Avoid contact with eyes and skin. Preventive skin protection recommended. Remove contaminated, soaked clothing immediately. Clean work areas regularly. Provide emergency shower and eye-bath. Do not eat, drink or smoke when handling. Keep away from foodstuff, drink and feedingstuff.

Further information for system design and engineering measures

Observe information in section 7. Observe national regulatory requirements.

Personal protection equipment:**Respiratory protection**

If inhalative exposure above the occupational exposure limit cannot be excluded, adequate respiratory protection equipment must be used. Suitable respiratory equipment: Respirator with a full face mask, according to acknowledged standards such as EN 136. Recommended Filter type: Gas filter type ABEK (certain inorganic, organic and acidic gases and vapors; ammonia/amines), according to acknowledged standards such as EN 14387

Observe the equipment manufacturer's information and wear time limits for respirators.

Eye protection

protective goggles .

Hand protection

Protective gloves are required at all times when handling the material, according to recognized standards such as EN374.

Recommended glove types: Protective gloves made of butyl rubber
thickness of the material: > 0,3 mm
Breakthrough time: > 480 min

Recommended glove types: Protective gloves made of nitrile rubber
thickness of the material: > 0,4 mm
Breakthrough time: 10 - 30 min

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Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Note that, due to the numerous external influences (such as temperature), a chemically resistant protective glove in daily use may have a service life that is considerably shorter than the measured break through time.

Skin protection

protective clothing .

8.2.2 Exposure to the environment limited and controlled

Prevent material from entering surface waters, drains or sewers and soil.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Property:	Value:	Method:
Appearance		
Physical state	liquid	
Form	paste	
Colour	colourless dark	
Odour		
Odour	faint	
Odour limit		
Odour limit	no data available	
pH-Value		
pH-Value	Not applicable. Insoluble in water.	
Melting point/freezing point		
Melting point / melting range	not applicable	
Initial boiling point and boiling range		
Boiling point / boiling range	not applicable	
Flash point		
Flash point	> 200 °C	(DIN 51376)
Evaporation rate		
Evaporation rate	no data available	
Upper/lower flammability or explosive limits		
Lower explosion limit (LEL)	not applicable	
Upper explosion limit (UEL)	not applicable	
Vapour pressure		
Vapour pressure	not applicable	
Solubility(ies)		
Water solubility / miscibility	practically insoluble	
Vapour density		
Relative gas/vapour density	No data known.	
Relative Density		
Relative Density	1,1 (23 °C)	(DIN 53479)
	(Water / 4 °C = 1,00)	
Density	1,1 g/cm ³ (23 °C)	(DIN 53479)
Partition coefficient: n-octanol/water		
Partition coefficient: n-octanol/water	No data known.	
Auto-ignition temperature		
Ignition temperature	> 400 °C	(DIN 51794)
Decomposition temperature		
Thermal decomposition	> 250 °C	
Viscosity		
Viscosity (dynamic)	300000 mPa.s at 25 °C	(DIN EN ISO 3219)
Viscosity (dynamic)	30000 mPa.s at 25 °C	(DIN EN ISO 3219)
	shear rate : 25 1/S	
Molecular mass		
Molecular mass	not applicable	

9.2 Other information

Explosion limits for released hydrogen: 4 - 75.6%(V). Explosion limits for released methanol: 5.5 - 44%(V).

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SECTION 10: Stability and reactivity**10.1 – 10.3 Reactivity; Chemical stability; Possibility of hazardous reactions**

If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

Relevant information can possibly be found in other parts of this section.

10.4 Conditions to avoid

Moisture, heat, open flames, and other sources of ignition. Contact with contaminated piping or vessels or with corroded and rusty containers can increase the rate of hydrogen formation. Observe information in section 7.

10.5 Incompatible materials

Proton-active substances. Reacts with acids, basic substances (e.g. alkalis, ammonia, amines), alcohols, water, moisture, oxidizing agents, catalysts. The reaction takes place with the formation of hydrogen and methanol.

10.6 Hazardous decomposition products

Methanol by hydrolysis. Upon contact with the substances mentioned in 10: hydrogen. Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****11.1.1 Acute toxicity****Product details:**

Route of exposure	Result/Effect	Species/Test system	Source
Oral	LD50: > 2000 mg/kg	Rat	Conclusion by analogy
dermal	LD50: > 2000 mg/kg	Rabbit	Conclusion by analogy

11.1.2 Skin corrosion/irritation**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

11.1.3 Serious eye damage / eye irritation**Product details:**

Result/Effect	Species/Test system	Source
No eye irritation	Rabbit	Conclusion by analogy OECD 405

11.1.4 Respiratory or skin sensitization**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

11.1.5 Germ cell mutagenicity**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

11.1.6 Carcinogenicity**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

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11.1.7 Reproductive toxicity**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

11.1.8 Specific target organ toxicity (single exposure)**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

11.1.9 Specific target organ toxicity (repeated exposure)**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

11.1.10 Aspiration hazard**Assessment:**

Based on the physical-chemical properties of the product no aspiration hazard must be expected.

11.1.11 Further toxicological information

Hydrolysis product / impurity: Methanol (CAS 67-56-1) is readily and rapidly absorbed at all exposure routes and is toxic by all routes. Methanol may cause irritation of the mucosa, as well as nausea, vomiting, headaches, vertigo and visual disorders, including blindness (irreversible damage to the optic nerve), acidosis, spasms, narcosis and coma. There may be a delay in the onset of these effects after exposure.

SECTION 12: Ecological information**12.1 Toxicity****Assessment:**

Based on available data no acute effects on aquatic organisms that are relevant for classification must be expected for the product up to its limits of water solubility.

12.2 Persistence and degradability**Assessment:**

Polymer component: biologically not degradable. Elimination by adsorption to activated sludge.

12.3 Bioaccumulative potential**Assessment:**

Polymer component: No adverse effects expected.

12.4 Mobility in soil**Assessment:**

Polymer component: insoluble in water.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

none known

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SECTION 13: Disposal considerations**13.1 Waste treatment methods****13.1.1 Material**

Recommendation:

Risk of oxyhydrogen formation upon contact with the substances mentioned in 10. Material designated for disposal must be segregated from incompatible substances or materials specified in Sect. 10. Wastes of this material should not be mixed with other wastes. Provide measures such as vented bungs to ensure pressure relief in the waste containers. Material that cannot be used, reprocessed or recycled should be disposed of in accordance with Federal, State, and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include, e.g., landfill or incineration.

13.1.2 Uncleaned packaging

Recommendation:

Containers may contain hazardous quantities of hydrogen gas. Uncleaned containers should not be reused to hold another material due to the potential for reaction between residual product and incompatible materials. Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations. Uncleaned packaging should be treated with the same precautions as the material.

13.1.3 Waste Disposal Legislation Ref.No.(EC)

It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

SECTION 14: Transport information**14.1 – 14.4 UN number; UN proper shipping name; Transport hazard class(es); Packing group****Road ADR:**

Valuation: Not regulated for transport

Railway RID:

Valuation: Not regulated for transport

Transport by sea IMDG-Code:

Valuation: Not regulated for transport

Air transport ICAO-TI/IATA-DGR:

Valuation: Not regulated for transport

14.5 Environmental hazards

Hazardous to the environment: no

14.6 Special precautions for user

Relevant information in other sections has to be considered.

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

Bulk transport in tankers is not intended.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

National and local regulations must be observed.

For information on labelling please refer to section 2 of this document.

Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances (Seveso III):

Not applicable

Relevant regulations:

SI 2002/1689: CHIP Regulations 2002

SI 2002/2677: COSHH Regulations 2002

SI 1999/3242: Management of Health & Safety at Work Regulations 1999

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Health & Safety at Work Act 1974

SI 1993/1643: Environmental Protection Act 1993 & Subsidiary Regulations.

Other national and local measures relating to the workplace, pollution control, environmental protection and waste control.

Other specifications, restrictions and prohibitions:

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors - ANNEX I. RESTRICTED EXPLOSIVES PRECURSORS: Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors - ANNEX II. REPORTABLE EXPLOSIVES PRECURSORS: Not applicable

Details of international registration status

Relevant information about individual substance inventories, where available, is given below.

Japan	: ENCS (Handbook of Existing and New Chemical Substances): This product is listed in, or complies with, the substance inventory.
Australia	: AIIC (Australian Inventory of Industrial Chemicals): This product is listed in, or complies with, the substance inventory.
China.....	: IECSC (Inventory of Existing Chemical Substances in China): This product is listed in, or complies with, the substance inventory.
Canada	: DSL (Domestic Substance List): This product is listed in, or complies with, the substance inventory.
Philippines.....	: PICCS (Philippine Inventory of Chemicals and Chemical Substances): This product is listed in, or complies with, the substance inventory.
United States of America (USA).....	: TSCA (Toxic Substance Control Act Chemical Substance Inventory): All components of this product are listed as active or are in compliance with the substance inventory.
Taiwan	: TCSI (Taiwan Chemical Substance Inventory): This product is listed in, or complies with, the substance inventory. General note: The Taiwanese chemicals regulation requires a phase 1 registration for TCSI-listed or TCSI-compliant substances if imports to Taiwan or manufacturing in Taiwan exceed the trigger quantity of 100 kg/a (for mixtures to be calculated per each ingredient). It is the duty of the importing/manufacturing legal entity to take care of this obligation.
European Economic Area (EEA).....	: REACH (Regulation (EC) No 1907/2006): General note: the registration obligations for substances imported into the EEA or manufactured within the EEA by the supplier mentioned in section 1 are fulfilled by the said supplier. The registration obligations for substances imported into the EEA by customers or other downstream users must be fulfilled by the latter.
South Korea (Republic of Korea)	: AREC (Act on Registration and Evaluation of Chemicals; "K-REACH"): Please approach your regular contact for more detailed information.

15.2 Chemical safety assessment

Due to the results of the chemical safety assessment, exposure scenarios and identified uses are not of relevance for this safety data sheet.

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SECTION 16: Other information**16.1 Material**

The details in this document are based on the state of our knowledge at the time of revision. They do not constitute an assurance of the described product properties in terms of statutory warranty requirements.

The providing of this document to a recipient does not relieve the recipient of his or her responsibility toward compliance with all laws and stipulations applicable to the product. This applies in particular to the further sale or distribution of the product or substances or items containing the product, in other jurisdictions and with regard to the protection of third-party intellectual property rights. If the described product is processed or mixed with other substances or materials, the details stated in this document cannot be conferred to the resultant new product unless this has been expressly mentioned. If the product is repackaged, the recipient is obligated to additionally provide the required safety-related information.

WACKER restricts the use of its products inside the human body or in contact with bodily fluids and mucosa. For further details please review our Health Care Policy on www.wacker.com. WACKER may cancel any delivery obligation(s) if the Health Care Policy is not observed.

16.2 Further information:

Commas appearing in numerical data denote a decimal point. Vertical lines in the left-hand margin indicate changes compared with the previous version. This version supersedes all previous versions.

Explanation of the GHS classification code:

Eye Dam. 1; H318.....: Serious eye damage/eye irritation Category 1; Causes serious eye damage.

Aquatic Chronic 3; H412 Long-term (chronic) aquatic hazard Category 3; Harmful to aquatic life with long lasting effects.

.....:

- End of Safety Data Sheet -