

Material Safety Data Sheet

Material: 60006506

SILRES® BS 290

Version: 1.0 (US)

Date of print: 02/18/2009

Date of last alteration: 05/28/2008

1 Product and company identification**1.1 Identification of the substance or preparation:**

Commercial product name: SILRES® BS 290
Use of substance / preparation: Industrial.
Modifying agent for: Building materials

1.2 Company/undertaking identification:

Manufacturer/distributor: Wacker Chemie AG
Hanns-Seidel-Platz 4
81737 München
Germany

Customer information: Wacker Chemical Corporation
3301 Sutton Road
Adrian, Michigan 49221-9397
USA
InfoLine:
Tel (517) 264-8240, Fax (517) 264-8740
Hours of operation:
Monday - Friday, 8 am to 5 pm (eastern standard time)
Corporate website: www.wackersilicones.com

Emergency telephone no. (24h): (517) 264-8500
Transportation emergency: (800) 424-9300 (CHEMTREC, USA)
(703) 527-3887 (CHEMTREC, international)

This MSDS was prepared by the Regulatory Affairs and Product Safety Department (RAPS) of Wacker Chemical Corporation.

2 Composition/information on ingredients**2.1 Chemical characterization (preparation):****Chemical characteristics**

alkylsilicone resin with alkoxy groups + filler + auxiliary

2.2 Information on ingredients:

Type	CAS No.	Substance	Content [wt. %]		Note
			Lower	Upper	
INHA	34396-03-7	Isooctyl trimethoxy silane	10.0	30.0	
INHA		organotin compound	>=1.0	<=5.0	

Type: HYD - by-product upon hydrolysis, INHA - ingredient, NEBE - by-product, MONO - residual monomer, VERU - impurity, VUL - by-product upon vulcanization. *** **Note:** C1 - IARC carcinogen, C2 - NTP carcinogen, C3 - OSHA carcinogen, NH - non-hazardous, R - reproductive toxin.

Substances listed in the Subsections "HAPS" and "California Proposition 65 Carcinogens / Reproductive Toxins" that are not listed in Section 2 are only present at quantities below 0.1% for California Proposition 65 listed toxins or below 1% for non-carcinogenic HAPS or they are inextricably bound in the product.

3 Hazards identification**3.1 Hazards classifications****HMIS® rating (product as packaged):**

Health: 1

Fire: 2

Reactivity: 1

PPE: G

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Note: Respiratory protection is only recommended in the event that ventilation or engineering controls are unable to maintain exposures below recommended levels; or in the event of a spill or other emergency response situation. (HMIS codes are based on contact with the product as packaged and any hydrolysis by-products, if present.) Hazardous Materials Identification System and HMIS are registered trademarks of the National Paint and Coatings Association.

Canadian WHMIS Classification: B3**Canadian WHMIS Classification:** B3**3.2 Emergency overview and potential hazards****Signal Word:**

WARNING

Physical Hazards:

This material will flash but does not sustain combustion. Combustible liquid and vapor.

Acute health effects**Route of entry or possible contact:**

eyes , skin , inhalation , ingestion

Eye contact:

May cause eye irritation.

Skin contact:

May cause skin irritation.

Inhalation:

If inhaled at high concentrations lung damage is possible. Harmful (Toxic) if inhaled.

Ingestion:

Not expected in industrial use. Harmful (Toxic) if swallowed.

Additional information on acute health effects:

This material releases methanol upon hydrolysis. According to literature methanol (CAS-No. 67-56-1) irritates mucous membranes, has skin drying and narcotic effects up to coma or death. Absorption by the skin is possible. Possibility of damage to heart, kidneys, liver and optic nerves (blindness) over a period of time.

3.3 Further information:**Chronic health effects:**

Prolonged or repeated skin contact causes irritation. May cause eye irritation. See Sect. 3.2 "Acute health effects".

Medical conditions which may be aggravated by exposure:

Methanol may aggravate existing liver and/or kidney diseases.

Carcinogens/Reproductive toxins:

There are no carcinogenic ingredients present at or over 0.1% in this material. This material does not contain any reproductive toxins at or above OSHA or WHMIS reportable levels.

See Section 11 for Toxicological Information, if any.

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4 First-aid measures**4.1 General information:**

Get medical attention if irritation occurs or if breathing becomes difficult. Remove contaminated clothing and shoes. Show label.

4.2 After inhalation:

If inhaled, remove to fresh air, keep the victim laying down and restful. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

4.3 After contact with the skin:

If contact with skin, immediately flush skin with plenty of water or with water and soap. Clean contaminated clothing and shoes before reuse.

4.4 After contact with the eyes:

If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 min.

4.5 After swallowing:

If conscious, give several small portions of water to drink. Get medical attention immediately. Designate the product. Indicate the possible formation of: methanol .

4.6 Advice for the physician:

In case of contact with water material splits off (also in gastrointestinal tract) methanol in larger amounts; therefore consider poisoning on methanol and also observe known period of latency of several days.

5 Fire-fighting measures**5.1 Flammable properties:**

	Method
Flash point.....	42 °C (107 °F) (DIN 51755)
Sustained combustibility.....	> 110 °C (> 230 °F) (ISO 9038)
Boiling point / boiling range.....	> 190 °C (> 374 °F) at 1013 hPa
Lower explosion limit (LEL).....	not determined
Upper explosion limit (UEL).....	not determined
Ignition temperature	> 280 °C (> 536 °F) (DIN 51794)
NFPA Hazard Class (comb./flam.liquid):	II

5.2 Fire and explosion hazards:

This material will flash but does not sustain combustion. As a result of hydrolysis flammable vapors may accumulate in the container head space. Consider possible formation of explosive mixtures with air, for example in uncleaned containers by moisture. Explosion limits for hydrolysis product: 5.5-44% v/v (methanol) .

5.3 Recommended extinguishing media:

water-mist , carbon dioxide , sand , dry chemical or alcohol-resistant foam Do not use: water-spray , sharp water jet .

5.4 Unsuitable extinguishing media:

none known

5.5 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:

Hazardous decomposition products: carbon dioxide , carbon monoxide , formaldehyde , silicon dioxide and incompletely burnt hydrocarbons .

5.6 Fire fighting procedures:

Cool endangered containers with water. Fire fighters should wear full protective clothing including a positive pressure self-contained breathing apparatus.

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6 Accidental release measures**6.1 Precautions:**

Wear personal protection equipment (see section 8). Keep unprotected persons away. Avoid contact with eyes and skin. Avoid inhaling mists and vapours. If material is released indicate risk of slipping.

HAZWOPER PPE Level: D**6.2 Containment:**

Prevent material from entering surface waters, drains or sewers and soil. Contain any fluid that runs out using suitable material (e.g. earth). Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers.

Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free phone number (800) 424-8802.

6.3 Methods for cleaning up:

Do not flush away with water. For small amounts: Absorb with a liquid binding material such as diatomaceous earth and dispose of according to local/state/federal regulations. Contain larger amounts and pump up into suitable containers. Clean any slippery coating that remains using a detergent / soap solution or another biodegradable cleaner. Exhaust vapours.

6.4 Further information:

Eliminate all sources of ignition.

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

Ensure adequate ventilation. Keep away from incompatible substances in accordance with section 10.2. Spilled substance increases risk of slipping.

Precautions against fire and explosion:

Product can separate methanol. Vapours may form in closed rooms with air mixtures, leading to explosion in the presence of sources of ignition, even in empty, uncleaned vessels. Keep away from sources of ignition and do not smoke. Take precautionary measures against electrostatic charging. Cool endangered containers with water.

7.2 Storage**Conditions for storage rooms and vessels:**

Make sure there is no possibility of entering the ground.

Advice for storage of incompatible materials:

not applicable

Further information for storage:

Protect against moisture. Store in original container only. Keep container tightly closed and store in a cool, well ventilated place.

8 Exposure controls and personal protection**8.1 Engineering controls****Ventilation:**

Use only with adequate ventilation.

Local exhaust:

yes

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8.2 Associate substances with specific control parameters such as limit values

Maximum airborne concentrations at the workplace:

CAS No.	Material	Type	mg/m ³	ppm	Dust fract.
67-56-1	Methanol	OSHA PEL	260.0	200.0	
	Tin compounds (organic)	OSHA PEL	0.1		
67-56-1	Methanol	ACGIH TWA		200.0	
	Tin compounds (organic)	ACGIH TWA	0.1		

Re Methanol (CAS-no. 67-56-1): STEL is 250 ppm, skin notation (ACGIH); STEL is 250 ppm, skin notation (NIOSH).

Re Tin compounds (organic): STEL is 0,2 mg/m3, skin notation (ACGIH).

8.3 Personal protection equipment (PPE)

Respiratory protection:

In case of long or strong exposure use a NIOSH approved respirator for: organic vapors . Alternatively use a positive pressure, air-supplied respirator (regard TLV).

Hand protection:

butyl rubber protective gloves

Eye protection:

tight fitting chemical safety goggles

Other protective clothing or equipment:

protective clothing to cover exposed areas of arms, legs and torso . Provide work station with emergency shower and eye-bath.

8.4 General hygiene and protection measures:

Do not breathe dust/vapor/mist/gas/aerosol. Avoid contact with eyes and skin. Do not eat, drink or smoke when handling. Wash thoroughly after handling.

9 Physical and chemical properties

9.1 Appearance

Physical state / form.....: liquid
 Colour.....: colourless
 Colour.....: opaque
 Odour.....: slight

9.2 Safety parameters

	Method
Melting point / melting range.....: not determined	
Boiling point / boiling range.....: > 190 °C (> 374 °F) at 1013 hPa	
Flash point.....: 42 °C (107 °F)	(DIN 51755)
Sustained combustibility.....: > 110 °C (> 230 °F)	(ISO 9038)
Ignition temperature: > 280 °C (> 536 °F)	(DIN 51794)
Lower explosion limit (LEL).....: not determined	
Upper explosion limit (UEL).....: not determined	
Vapour pressure.....: < 50 hPa at 20 °C (68 °F)	
Vapour pressure.....: < 120 hPa at 50 °C (122 °F)	
Density.....: 1.05 g/cm ³ at 25 °C (77 °F)	(DIN 51757)
Water solubility / miscibility.....: not applicable	
pH-Value.....: not applicable	
Viscosity (dynamic).....: 15 - 19 mPa.s	(DIN 51562)

9.3 Further information

Re 9.2 solubility in water: Hydrolytic decomposition occurs. Explosion limits for released methanol: 5.5 - 44%(V). Re 9.2 pH Value: Product displays neutral reaction.

VOC Released During Cure.....: 153 g/l (Estimated Value)

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10 Stability and reactivity**10.0 General information:**

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

10.1 Conditions to avoid:

moisture

10.2 Materials to avoid:

Reacts with: water , basic substances and acids . Reaction causes the formation of: methanol .

10.3 Hazardous decomposition products:

Under the effect of humidity, water and protic agents: methanol . The following applies for the silicone content of the substance: Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

10.4 Further information:

Hazardous polymerization cannot occur.

11 Toxicological information**11.1 General information:**

Toxicological testing has not been conducted with this material.

11.2 Toxicological data:

Experience with man:

-
-

12 Ecological information**12.1 Information on elimination (persistence and degradability)**

Biodegradation / further information:

The product of hydrolysis (methanol) is readily biodegradable. Silicone content: Biologically not degradable.

Further information:

By hydrolysis: Methanol and silanol- and/or siloxanol-compounds . Silicone content: Elimination by adsorption to activated sludge.

12.2 Behaviour in environmental compartments

Mobility

-

Further information:

-

12.3 Ecotoxicological effects:

According to past experience toxicity to fish is improbable.

12.4 Additional information

Other harmful effects

-

General information:

According to our present knowledge no further data known.

13 Disposal considerations**13.0 RCRA Waste Classification:**

D001 (Ignitable)

This classification applies only to the material as it was originally produced.

13.1 Product disposal

Recommendation:

Dispose of according to regulations by incineration in a special waste incinerator. Observe local/state/federal regulations.

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13.2 Packaging disposal**Recommendation:**

Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations.

14 Transport information**14.1 US DOT & CANADA TDG SURFACE**

Valuation.....: Not regulated for transport

Other Information.....: This material has been tested and does not sustain combustion.

14.2 Transport by sea IMDG-Code

Valuation.....: Not regulated for transport

Comment.....: Not regulated in Class 3 - IMDG 2.3.1.3 - Substance does not sustain combustion!

14.3 Air transport ICAO-TI/IATA-DGR

Valuation.....: Not regulated for transport

Comment.....: Not regulated in Class 3 - IATA 3.3.1.3 / ICAO 3.1.3 - Substance does not sustain combustion!

15 Regulatory information**15.1 U.S. Federal regulations****TSCA inventory status and TSCA information:**

This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory.

This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory.

TSCA 12(b) Export Notification:

This material does not contain any TSCA 12(b) regulated chemicals.

This material does not contain any TSCA 12(b) regulated chemicals.

CERCLA Regulated Chemicals:

This material does not contain any CERCLA regulated chemicals.

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This material does not contain any CERCLA regulated chemicals.

SARA 302 EHS Chemicals:

This material does not contain any SARA extremely hazardous substances.

SARA 302 EHS Chemicals:

This material does not contain any SARA extremely hazardous substances.

SARA 311/312 Hazard Class:

Fire hazard. Delayed (chronic) health hazard.

Fire hazard. Delayed (chronic) health hazard.

SARA 313 Chemicals:

This material does not contain any SARA 313 chemicals above de minimus levels.

SARA 313 Chemicals:

This material does not contain any SARA 313 chemicals above de minimus levels.

HAPS (Hazardous Air Pollutants):

67-56-1 Methanol

15.2 U.S. State regulations**California Proposition 65 Carcinogens:**

This material does not contain any chemicals known to the state of California to cause cancer.

This material does not contain any chemicals known to the state of California to cause cancer.

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California Proposition 65 Reproductive Toxins:

This material does not contain any chemicals known to the state of California to cause reproductive effects.

This material does not contain any chemicals known to the state of California to cause reproductive effects.

Massachusetts Substance List:**Massachusetts Substance List:**

This material contains no listed components.

This material contains no listed components.

New Jersey Right-to-Know Hazardous Substance List:**New Jersey Right-to-Know Hazardous Substance List:**

This material contains no listed components.

This material contains no listed components.

Pennsylvania Right-to-Know Hazardous Substance List:**Pennsylvania Right-to-Know Hazardous Substance List:**

This material contains no listed components.

This material contains no listed components.

15.3 Canadian regulations

This product has been classified in accordance with the Hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS Hazard Classes:

B3

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B3

DSL Status:

This material or its components are listed on the Canadian Domestic Substances List.

DSL Status:

This material or its components are listed on the Canadian Domestic Substances List.

Canadian Ingredient Disclosure List:

organotin compound

Canadian Ingredient Disclosure List:

organotin compound

15.4 Other international regulations**EU Risk Phrases:**

R-Phrase	Description
R10	Flammable.

EU Safety Phrases:

S-Phrase	Description
S7/9	Keep container tightly closed and in a well-ventilated place.

Details of international registration status

Listed on or in accordance with the following inventories:

IECSC - China

TSCA - USA

PICCS - Philippines

EINECS - Europe

ECL - Korea

DSL - Canada

AICS - Australia

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16 Other information**16.1 Additional information:**

This Material Safety Data Sheet (MSDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents. This MSDS provides selected regulatory information on this product, including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

Vertical lines in the left-hand margin indicate changes compared with the previous version.

16.2 Glossary of Terms:

ACGIH - American Conference of Governmental Industrial Hygienists

DOT - Department of Transportation

hPa - Hectopascals

mPa*s - Milli Pascal-Seconds

OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit

ppm - Parts per Million

SARA - Superfund Amendments and Reauthorization Act

STEL - Short Term Exposure Limit

TSCA - Toxic Substances Control Act

TWA - Time Weighted Average

WHMIS - Canadian Workplace Hazardous Materials Identification System

Flash point determination methods

ASTM D56

ASTM D92, DIN 51376, ISO 2592

ASTM D93, DIN 51758, ISO 2719

ASTM D3278, DIN 55680, ISO 3679

DIN 51755

Common name

Tagliabue (Tag) closed cup

Cleveland open cup

Pensky-Martens closed cup

Setaflash or Rapid closed cup

Abel-Pensky closed cup

16.3 Conversion table:

Pressure: 1 hPa * 0.75 = 1 mm Hg = 1 Torr; 1 bar = 1000 hPa

Viscosity: 1 mPa*s = 1 Centipoise (Cp)