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# SILICONES

PERSONAL CARE

# struksilon

SOLUTIONS | TAILORMADE | WORLDWIDE

**FROM A PRODUCER OF CHEMICALS FOR LEATHER PROCESSING ...**



**IN 1877, CHRISTOPH SEILACHER AND KARL SCHILL FOUNDED A SMALL FACTORY IN HEILBRONN FOR PRODUCING CHEMICALS FOR LEATHER PROCESSING. IN 1925, SCHILL+SEILACHER SHIFTED ITS OPERATIONS TO HAMBURG AS THE QUANTITY AND VOLUME OF EXPORTS DEMANDED THIS.**

# 1877

After the Second World War, a second factory was built in Böblingen near Stuttgart while the factory in Hamburg, which had been destroyed, was rebuilt. Since then, both companies, Schill+Seilacher, work independently from one another.

The company has managed to increase its production and the export of its products on a continual basis. In 1979, the Struktol Company of America was founded in Stow (Ohio); it oversees the North American market and disposes of its own production halls and research laboratories.

In the early 1990's, another member, Schill+Seilacher Chemie GmbH, joined the Schill+Seilacher Group with a factory in Pirna, Saxony.

# WORLDWIDE

**... TO A GLOBAL PLAYER IN THE PRODUCTION OF INDUSTRIAL PROCESS ADDITIVES.**

**TODAY, THE PRODUCTS OF SCHILL+SEILACHER ARE SUCCESSFULLY IMPLEMENTED AROUND THE WORLD: IN THE PAPER AND THE LEATHER INDUSTRY, IN THE SYNTHETIC FIBER AND TEXTILE INDUSTRY OR RUBBER AND LATEX INDUSTRY AS WELL AS MANY OTHER SECTORS OF INDUSTRY.**

Over 600 employees worldwide are responsible for the success of the innovative Schill+Seilacher Group, which continues to be family-owned. Rigorous activities in research and development ensure dynamic growth.

The high standard of quality characterising our products is guaranteed in each factory thanks to application experts boasting outstanding qualifications, state-of-the-art laboratories, the latest in test equipment, up-to-date production, and a certified system of quality (ISO 9001 and ISO 14001).

In addition to an extensive range of products, we offer our customers product information, recipe recommendations, test, and training programmes right down to complete, specific solutions to our customer's problems.

SCHILL+SEILACHER "STRUKTOL" GMBH AT A GLANCE

RUBBER ADDITIVES

ANTIFOAMS

POLYDIS

LATEX ADDITIVES

**SILICONES**

RELEASE AGENTS

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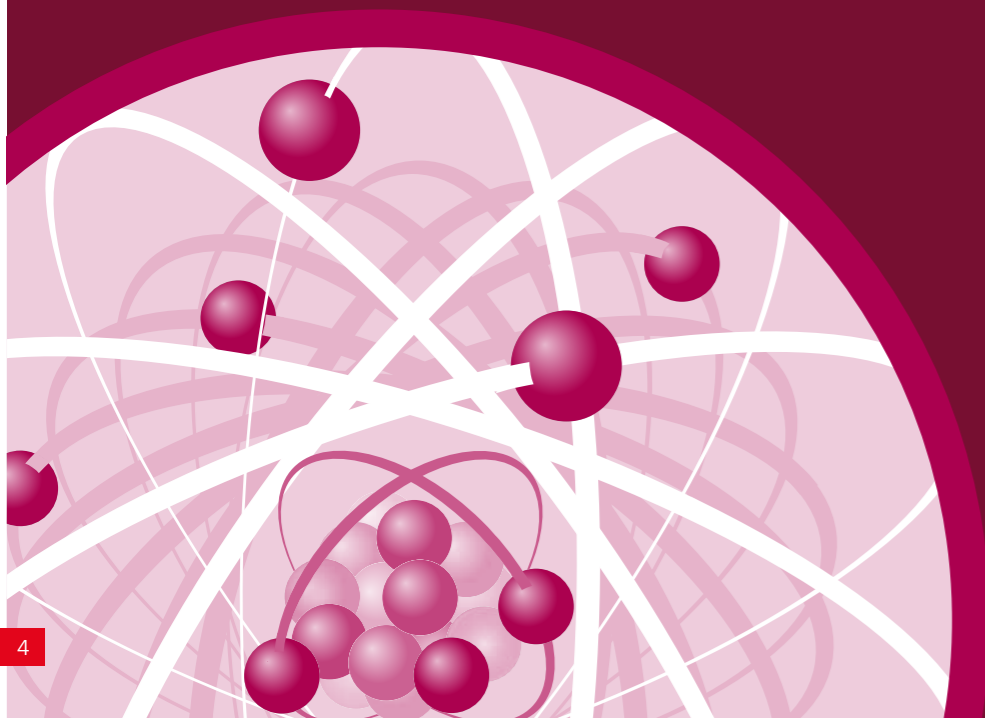


## SILICONES FOR PERSONAL CARE

Wherever classic products reach their physical limits, silicones are often able to provide at least an alternative solution. Silicones are particularly advantageous because of their high temperature stability, excellent lubrication properties, soft-touch and excellent hydrophilic or hydrophobic qualities.

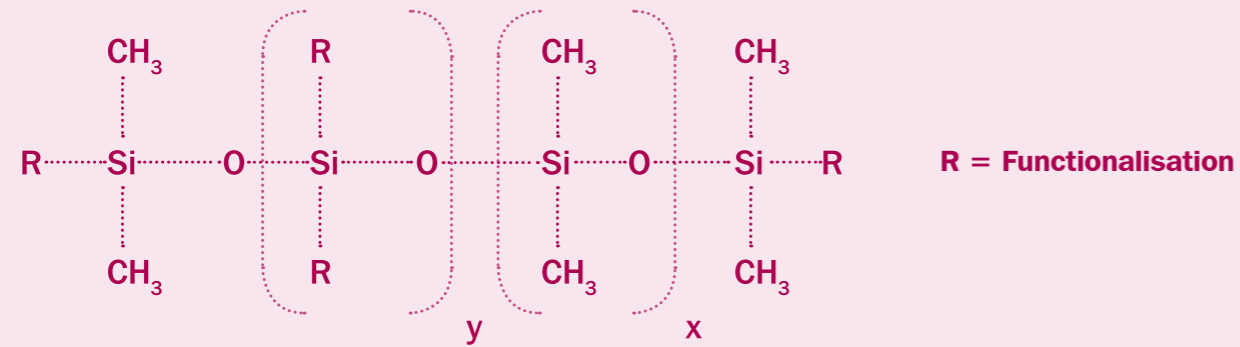
Schill+Seilacher an acclaimed producer of additives and special auxiliaries is able to offer and produce customized products for a lot of applications. The use of Silicones as fluids, emulsions, dispersions and compounds offers cost efficient solutions, helping to minimize the use of chemical substances and optimizing the status to meet specific requirements. We respond proactively to individual demands and wishes of customers, by providing first class advice and technical support, also on-side locally.

Our products fulfil the high quality demands of silicones delivered to formulators of personal care and household products.



Silicones are polymers combining organic as well as inorganic characteristics. The backbone structure is made from alternating silicone and oxygen atoms. Free valences of the silicon are functionalised by specific moieties (R) depending on the required properties and envisaged application.

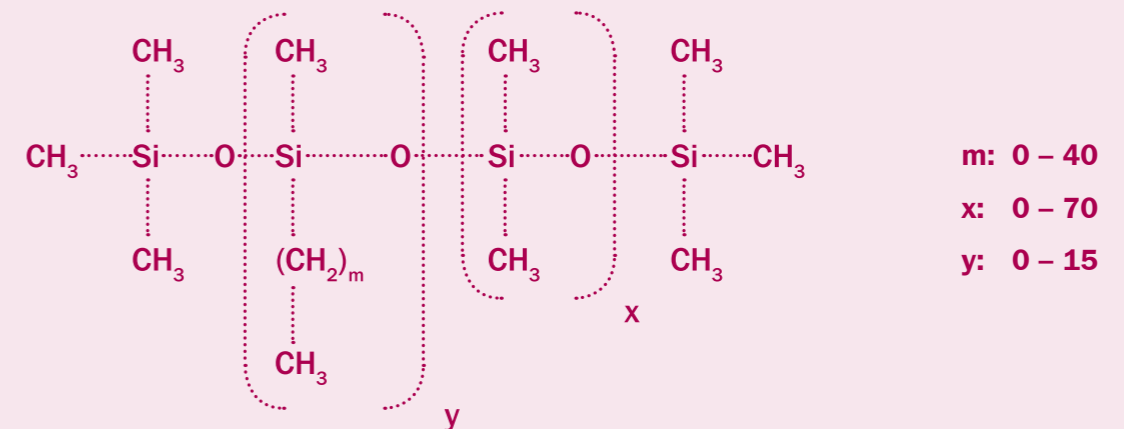
Silicones provided by Schill+Seilacher offer many benefits compared to conventional organic products. This brochure presents an overview of “tailor made” products and their applications designed for personal care.



Alkyl modified silicone oils (INCI: Alkyl Dimethicone) are made by substitution of methyl groups by long-chained alkyl groups.

**Sil-O-San 8631C** INCI: Cetyldimethicone

CHARACTERISTICS	PROPERTIES	APPLICATIONS
<ul style="list-style-type: none"> <li>■ Viscosity 70 – 140 mPas</li> <li>■ Very good soluble, e.g. in cyclopentasiloxane (D5)</li> <li>■ Colourless</li> <li>■ High spreading ability</li> <li>■ Conform to German „Öko-Test“ requirements at a dosage of max. 1 %</li> </ul>	<ul style="list-style-type: none"> <li>■ Boosting the light protective effect</li> <li>■ Very good solubility in cosmetic oils and waxes</li> <li>■ Providing a very good wetting behaviour</li> <li>■ Improving the care properties</li> <li>■ Enhancing the brilliance</li> <li>■ Improving gloss, feeling and softness</li> </ul>	<ul style="list-style-type: none"> <li>■ Sunscreen 0.9 – 3.0 %</li> <li>■ Emulsions 0.9 – 3.0 %</li> <li>■ Make-up products 0.3 – 1.5 %</li> <li>■ Lipsticks 0.2 – 1 %</li> <li>■ Hair conditioner 0.9 – 5 %</li> </ul>





**Sil-O-San 8632C** INCI: C20-24 Alkyl Dimethicone

- Sunscreen 0.9 – 3.0 %
- Emulsions 0.9 – 3.0 %
- Make-up products 0.3 – 1.5 %
- Lipsticks 0.2 – 1 %
- Hair conditioner 0.9 – 5 %

**Sil-O-San 8633C** INCI: C24-28 Alkyl Dimethicone

- Sunscreen 0.9 – 3.0 %
- Emulsions 0.9 – 3.0 %
- Make-up products 0.3 – 1.5 %
- Lipsticks 0.2 – 1 %
- Hair conditioner 0.9 – 5 %

FORMULATION GUIDE

**PHASE A**

- Add ingredients in the given order, stir to uniformity
- Heat up to 65 °C

**PHASE B**

- Add ingredients in the given order, stir to uniformity
- Heat up to 65 °C, add to phase **A** without stirring, homogenisation
- Cool down to 35 °C

**PHASE C**

- Add phase **C**, short homogenisation

PHASE A	%	PRODUCER
Ethyl Oleate	1.0	Croda GmbH
Caprylic/Capric Triglycerides	1.0	Sasol Germany GmbH
Cetylstearylalkohol	1.7	BASF
C12-15 Alkylbenzoate	5.0	BASF
Dibutyl Adipate	3.0	BASF
Cetearyl Ethylhexanoate and Isopropyl Myristate	2.5	Sasol Germany GmbH
Octocrylene	4.0	Merck KGaA
Butyl Methoxydibenzoylmethane	3.0	Merck KGaA
Ethylhexyl Methoxycinnamate, BHT	5.0	Merck KGaA
Sil-O-San 8631C	0.9	Schill+Seilacher
Tocopherolacetate	0.5	Omikron
Xanthan Gum	0.2	SLI Chemicals
Acrylates/C10-30 Alkyl Acrylate Crosspolymer	0.2	Omikron

PHASE B	%	PRODUCER
Water	60.3	
Glycerin	5.0	SLI Chemicals
Distarch Phosphate	4.0	SLI Chemicals
2-Phenoxyethanol, Methylparaben, Propylparaben, Ethylparaben, Butylparaben, Isobutylparaben	0.8	SLI Chemicals
Polysorbat 20	0.3	Omikron

PHASE C	%	PRODUCER
Sodium Hydroxide (10 %)	1.2	
Parfum	0.4	Omikron

In polyether modified silicones (INCI: x/y PEG/PPG-Dimethicone) methyl groups are substituted by polyoxyethylene (PEG) and/or polyoxypropylene (PPG) units. The properties of these products can vary from hydrophilic to lipophilic.

**Sil-O-San 8611C** INCI: PEG-12 Dimethicone

CHARACTERISTICS	PROPERTIES	APPLICATIONS
<ul style="list-style-type: none"> <li>■ Silicone surfactant</li> <li>■ Water soluble</li> <li>■ Cloud point &gt; 80 °C</li> <li>■ Reduced amount of monomers and odour causing by-products</li> <li>■ pH neutral</li> </ul>	<ul style="list-style-type: none"> <li>■ Significant improvement of the foam structure (soft &amp; creamy)</li> <li>■ Provides a soft skin</li> <li>■ Wetting agent</li> <li>■ Plasticizer for hair styling</li> <li>■ Reduction of the surface tension and formation of micelles</li> <li>■ Toxicologically approved</li> </ul>	<ul style="list-style-type: none"> <li>■ Shampoo 0.4 – 1.0 %</li> <li>■ Shower products 0.4 – 1.0 %</li> <li>■ Foam bath 0.4 – 1.5 %</li> <li>■ Shaving products 0.6 – 2.0 %</li> <li>■ Hairstyling 0.5 – 5.0 %</li> </ul>

**Sil-O-San 8612C** INCI: PEG/PPG-20/20 Dimethicone

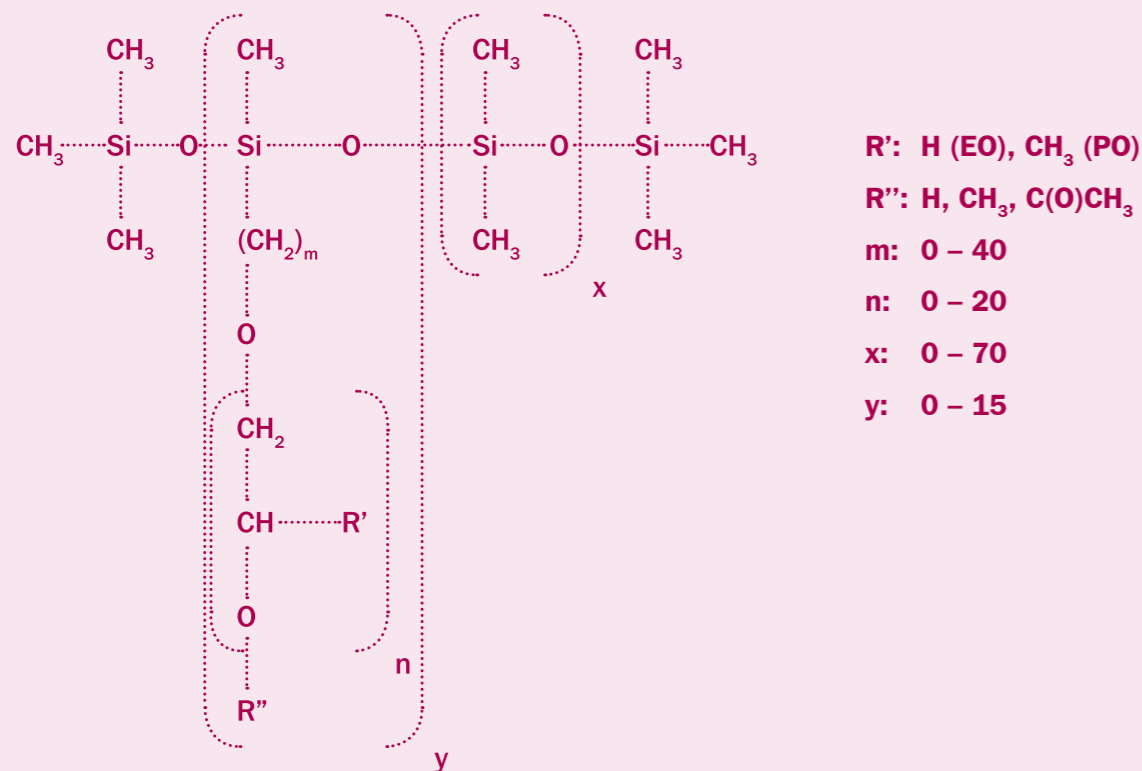
- Stabilisation of emulsions
- Forms a moisture film
- Alleviates combing

**Sil-O-San 8621C** INCI: Bis-PEG/PPG-15/5 Dimethicone

- Colour protection
- Emulsifier of W/O and O/W emulsions
- Provides clear gels
- Improves the transportation of active matter
- Reduces skin roughness

**Sil-O-San 8622C** INCI: Bis-PEG-12 Dimethicone

- Hair conditioning
- Emollient for skin care
- Levelling agent for nail polishes



SHAMPOO 2 IN 1

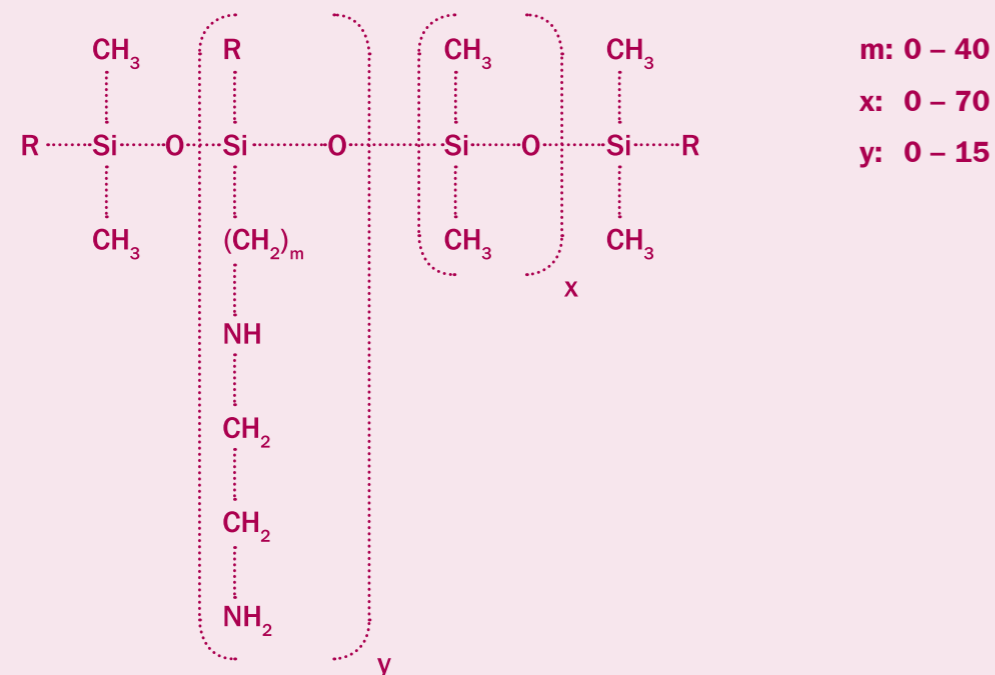
INGREDIENTS	%	PRODUCER
Water	34.18	
Sodium Laureth Sulfate	52.8	Clariant Deutschland
Cocoamidopropyl Betaine	5.0	Sasol Germany GmbH
PEG-200 Hydrogenated, Glycerylpalmitate (and PEG-7 Glycerylcoate)	2.0	Omikron
Sil-O-San 8611C	0.5	Schill+Seilacher
Benzylalcohol, Methylparaben, Propylparaben	0.6	SLI Chemicals
Parfum	0.2	Omikron
CI 7707	0.02	Omikron
NaOH/Citric Acid	0.2	
Sodium Chloride	4.5	

- 1: ADD INGREDIENTS IN THE GIVEN ORDER, STIR TO UNIFORMITY
- 2: ADJUST VISCOSITY WITH SODIUM CHLORIDE
- 3: ADJUST PH-VALUE WITH NaOH/CITRIC ACID

Amino modified silicones are produced by polycondensation. After this reaction the amino modified silicone is mixed and homogenised with an emulsifier and a preservative (raw materials in cosmetic quality).

**Sil-O-San 8651C** INCI: Amodimethicone (and) Trideceth-12 (and) Cetrimonium Chloride

CHARACTERISTICS	PROPERTIES	APPLICATIONS
<ul style="list-style-type: none"> <li>35 % cationic emulsion</li> <li>Water soluble</li> <li>Easy to formulate</li> <li>pH value ~ 8</li> <li>Low viscosity</li> <li>Reduced monomer content</li> </ul>	<ul style="list-style-type: none"> <li>Conditioning agent</li> <li>Forms a protective film on the hair</li> <li>Improves the wet combing and alleviates the dry combing</li> <li>Reduces combing time</li> <li>Light and soft hair touch</li> </ul>	<ul style="list-style-type: none"> <li>Rinse off conditioner 2.5 – 7.0 %</li> <li>Leave on conditioner 2.0 – 5.0 %</li> <li>Shampoo 0.5 – 3.0 %</li> <li>Styling products 1.5 – 4.0 %</li> <li>Hair colouring 0.5 – 3.0 %</li> </ul>



CONDITIONING HAIRCREAM

PHASE A	%	PRODUCER
Water	86.4	
Hydroxyethylcellulose	1.2	Dow Chemical

PHASE B	%	PRODUCER
Cetylalkohol	4.0	BASF
Sodium Stearoyl Glutamate	0.5	BASF
Sil-O-San 8631C	2.0	Schill+Seilacher
Cyclopentasiloxan	2.0	Dow Corning

PHASE C	%	PRODUCER
Sil-O-San 8651C	3.0	Schill+Seilacher
Dehydroacetic acid, Benzoic acid, Sorbic acid, Caprylyl Glycol, Benzyl alcohol	0.6	SLI Chemicals
Parfum	0.3	Omikron

PHASE A
<ol style="list-style-type: none"> <li>Dissolve Hydroxyethylcellulose in water</li> <li>Heat up to 65 °C</li> </ol>

PHASE B
<ol style="list-style-type: none"> <li>Add ingredients in the given order, stir to uniformity, heat up to 70 °C</li> <li>Add to phase A under stirring</li> <li>Cool down to 35 °C</li> </ol>

PHASE C
<ol style="list-style-type: none"> <li>Add ingredients to A+B in the given order, homogenisation</li> </ol>

HAIR CARE & AEROSOLS

	CONDITIONING	FOAM	WET GRIP	DRY GRIP	REDUCED DRY TIME	COLOUR PROTECTION	HEAT PROTECTION	GLOSS	SMOOTHING
<b>Sil-O-San 8611C</b> INCI: PEG-12 Dimethicone	✓✓	✓✓✓	✓✓	✓✓	✓✓	✓		✓✓	✓✓
<b>Sil-O-San 8612C</b> INCI: PEG/PPG-20/20 Dimethicone	✓✓	✓✓	✓✓	✓✓	✓✓			✓✓	✓✓✓
<b>Sil-O-San 8621C</b> INCI: BIS-PEG/PPG-15/5 Dimethicone	✓	✓✓	✓✓	✓✓	✓	✓✓		✓✓	
<b>Sil-O-San 8622C</b> INCI: Bis-PEG-12 Dimethicone	✓✓	✓✓	✓✓	✓✓		✓		✓✓✓	✓✓✓
<b>Sil-O-San 8631C</b> INCI: Cetyl dimethicone	✓✓		✓	✓		✓✓✓	✓✓✓	✓✓✓	✓✓
<b>Sil-O-San 8632C</b> INCI: C20-24 Alkyl Dimethicone	✓✓		✓	✓		✓✓✓	✓✓✓	✓✓	✓
<b>Sil-O-San 8633C</b> INCI: C24-28 Alkyl Dimethicone	✓					✓✓✓	✓✓✓	✓	✓
<b>Sil-O-San 8651C</b> INCI: Amodimethicone (and) Trideceth-12 (and) Cetrimoniumchloride	✓✓✓		✓✓✓	✓✓✓		✓✓			

✓✓✓ EXCELLENT   ✓✓ VERY GOOD   ✓ GOOD





BODY CARE & DEODORANTS

	CARE	SPREADING	ENHANCED APPLICATION	WETTING BEHAVIOUR	EMULSIFICATION	STABILISATION	COLOUR BRILLIANCE	GLOSS	REDUCED SKIN ROUGHNESS	WATER REPELLENT
<b>Sil-O-San 8611C</b> INCI: PEG-12 Dimethicone	✓✓	✓	✓	✓✓	✓✓	✓✓	✓	✓✓		
<b>Sil-O-San 8612C</b> INCI: PEG/PPG-20/20 Dimethicone	✓✓	✓✓	✓✓	✓	✓✓	✓✓✓		✓✓	✓✓	
<b>Sil-O-San 8621C</b> INCI: BIS-PEG/PPG-15/5 Dimethicone	✓✓✓	✓	✓✓✓	✓✓	✓✓✓		✓	✓	✓✓✓	✓
<b>Sil-O-San 8622C</b> INCI: Bis-PEG-12 Dimethicone	✓✓	✓✓✓	✓✓	✓✓✓	✓✓	✓✓		✓✓	✓✓✓	✓
<b>Sil-O-San 8631C</b> INCI: Cetyl dimethicone	✓✓	✓✓✓	✓✓✓	✓✓✓		✓✓	✓✓	✓✓✓	✓	✓✓✓
<b>Sil-O-San 8632C</b> INCI: C20-24 Alkyl Dimethicone	✓✓	✓	✓	✓✓	✓✓	✓✓	✓	✓		✓✓✓
<b>Sil-O-San 8633C</b> INCI: C24-28 Alkyl Dimethicone	✓	✓	✓	✓✓	✓	✓	✓✓	✓		✓✓✓

✓✓✓ EXCELLENT   ✓✓ VERY GOOD   ✓ GOOD



## SCHILL+SEILACHER AT A GLANCE

### → HAMBURG

SPECIALITY CHEMICALS FOR:

RUBBER  
ANTIFOAMS  
POLYDIS  
LATEX  
SILICONES  
RELEASE AGENTS



### → BÖBLINGEN

SPECIALITY CHEMICALS FOR:

FIBRES  
TEXTILES  
LEATHER  
PAPER  
COSMETICS  
FINE CHEMICALS



### → PIRNA

SPECIALITY CHEMICALS FOR:

SILICONES  
PU INDUSTRY  
PAPER  
TEXTILES  
COSMETICS



### → HUDSON / OHIO / USA

SPECIALITY CHEMICALS FOR:

NANOFIBRES



### → STOW / OHIO / USA

SPECIALITY CHEMICALS FOR:

PLASTICS  
WOOD COMPOSITES  
RUBBER  
LEATHER



[WWW.STRUKTOL.DE](http://WWW.STRUKTOL.DE)

#### REACH & Schill+Seilacher "Struktol" GmbH

All the substances produced by Schill+Seilacher "Struktol" GmbH have been pre-registered and are compliant with REACH. Furthermore, all key raw materials have also been pre-registered to ensure availability throughout the phase-in period. Schill+Seilacher has also taken all the necessary steps to maintain REACH compliance through the 2010, 2013 and 2018 registration deadlines. This includes being active in many consortia and taking on the role of Lead Registrant for high tonnage substances, so to guarantee the timely submission of our registration dossiers to European Chemical Agency (ECHA).

For further information, please contact our REACH department at: [REACH@struktol.de](mailto:REACH@struktol.de)

**Schill+Seilacher**

**Any Questions?**

Our service team will be pleased to answer any questions and to assist you with advice and information at all times. We can also advise you of the contact data of our local offices and agencies. Data sheets and samples of our products are available upon request.

For more information please contact:

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