Shandong Silico Organosilicon Materials Co.,LTD
Add: Daiyue Industrial Area, Taian, Shandong, China
Phone: +86-0538-5071566 86-13810587138
Fax: +86-0538-5071566
Email: info@silicorex.com
https://www.silicorex.com

SILICO ORGANOSILICON

Silico Organosilicon

SILICO SILICONE
GLOBAL-ORIENTED CHEMICAL SUPPLIER

SILICO ORGANOSILICON

Shandong Silico Silicone Materials Co., Ltd., established in 2007, is a leading high-tech enterprise specializing in the research, development, production, and sales of silicone materials. Our core products include silicone rubber, silicone oil, silicone resin, fumed silica, and silicone intermediates. We have a fully integrated production capacity, covering everything from silicon metal powder processing to silicone monomers, intermediates, and downstream products, ensuring a complete industrial chain.

Leading Manufacturer in China's Organosilicon Industry

With over 15 years of continuous growth, Shandong Silico has become one of China's largest organosilicon enterprises. The company operates three organosilicon monomer production units, with a methyl chlorosilane monomer production capacity of 600,000 tons per year. As a key supplier of silicone deep-processing products, we offer more than 300 grades of silicone rubber, silicone oil, fumed silica, and other advanced materials.

Why select Silico Organosilicon?

- Strong silane and silicone manufacturing capabilities built over 15+ years history.
- Flexible manufacturing facility able to handle kilograms to thousands of tons per years.
- Rapid and professional process development and scale-up capabilities.
- Offer tailored options while adhering to high quality and safety standards.

SILICO ORGANOSILICON

Silicone Water Repellent

Moisture is the primary cause of deterioration in mineral-based building materials. Due to their porous structure, these materials readily absorb water and dissolved contaminants through capillary action, leading to long-term damage.

Silicone-based water repellents—especially silanes—are composed of molecules smaller than the pores of most substrates. When applied, they penetrate deeply into the surface and react with both themselves and any available hydroxyl (–OH) groups in the presence of moisture. This reaction forms a durable silicone resin network through strong chemical bonds, delivering long-lasting protection.

Once cured, the treatment prevents liquid water from entering the pores while still allowing water vapor from within the structure to escape—maintaining breathability. Because the treatment resides within the substrate rather than on the surface, it is highly resistant to UV radiation and environmental degradation.

Silanes, the smallest silicone molecules, offer superior penetration, making them ideal for deeply porous substrates.

Silico Oranosilicon provides a range of advanced water-repellent solutions based on different formulations:

Cream-Based:

Highly effective in reducing water absorption, this formulation ensures excellent penetration and is easy to apply.

Water-Based:

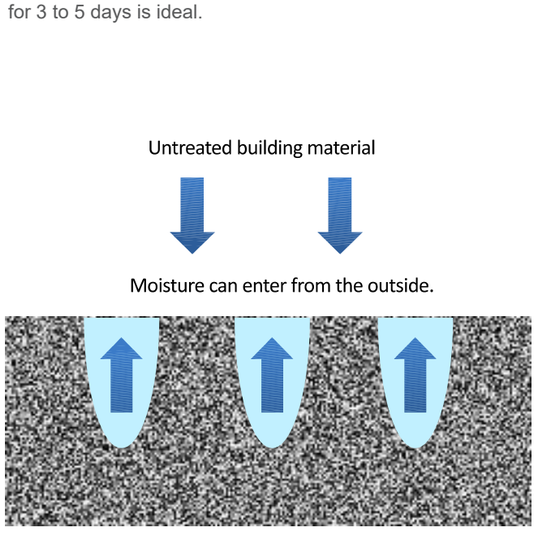
Solvent-free and ideal for highly absorbent materials, these products are odorless, non-flammable, and safe to handle with standard eye and hand protection. They do not require special ventilation and are easy to dilute and clean up with water on-site.

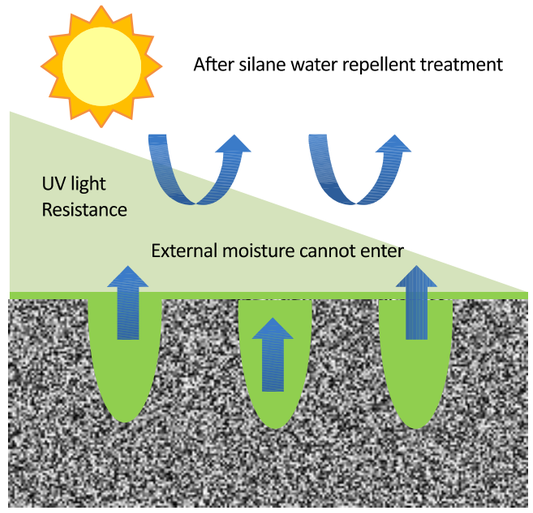
Silicone Water Repellent

Solvent Based:

Water-based water repellents generally do not penetrate as deeply into less porous substrates—such as dense concrete or natural stone—as solvent-based alternatives. This shallower penetration can, in some cases, lead to reduced long-term durability. However, the overall performance and longevity of a treatment depend on multiple factors, including the nature of the substrate, environmental conditions, and the concentration of the active ingredients. Therefore, durability is not solely determined by penetration depth.

Water-based treatments typically dry more slowly than solvent-based formulations. In most cases, this is not a significant issue unless ambient temperatures are particularly low. A drying time of at least 24 hours is recommended before exposing the treated surface to foot traffic, rain, or other forms of moisture. For optimal results and enhanced durability, allowing the treatment to cure for 3 to 5 days is ideal.





Products	Chemical Name	CAS #	EIECS #	Appearance	Active Ingredient
Silico® WR0301	n-Propyltrimethoxysilane	1067-25-0	213-926-7	Clear, colorless	99%
Silico® WR0411	isobutyltrimethoxysilane	18395-30-7	242-272-5	Clear, colorless	98%
Silico® WR0412	isobutyltriethoxysilane	17980-47-1	402-810-3	Clear, colorless	98%
Silico® WR0801	n-Octyltrimethoxysilane	3069-40-7	221-338-7	Clear, colorless	98%
Silico® WR0802	n-Octyltriethoxysilane	2943-75-1	220-941-2	Clear, colorless	98%
Silico® WR0812	iso-Octyltriethoxysilane	35435-21-3	252-558-1	Clear, colorless	98%
Silico® WR0818	iso-Octyltriethoxysilane Cream	35435-21-3	252-558-1	Creamy, white	80%
Silico® WR0777	Potassium Methyl Siliconate	31795-24-1	250-807-9	Clear, colorless	42~52%**
Silico® WR0772	Sodium Methyl Siliconate	16589-43-8	240-648-3	Clear, colorless	30%**
Silico® WR2020	Methyl hydrogen polysiloxane	63148-57-2	N.A.	Clear, colorless	100%
Silico® WR1001	Silane / Siloxane Emulsions	N.A.	N.A.	Milky, white	42%
Silico® WR4004	Silane / Siloxane Emulsions	N.A.	N.A.	Milky, white	42%
Silico® WR1290	Silane / Siloxane Formulations	N.A.	N.A.	Hazy, colorless	100%
Silico® WR5050	Silane / Siloxane Powder	N.A.	N.A.	White powder	50%

SILICO ORGANOSILICON

Products	Dilution	Substrate	Benefits	Equivalent
Silico® WR0301	Solvent	Concrete	Protect reinforced concrete from chlorine attack	DowCorning Z-6264.
Silico® WR0411	Solvent	Concrete	Protect reinforced concrete from chlorine attack	DowCorning Z-2306, Evonik IBTMO
Silico® WR0412	Solvent	Concrete	Protect reinforced concrete from chlorine attack	DowCorning Z-6403, Evonik IBTEO
Silico® WR0801	Solvent	Alkaline substrate such as new concrete	Contains small molecules that allow deep penetration; provides water repellency by bonding chemically with the substrate.	DowCorning Z-6665, Evonik OCTMO
Silico® WR0802	Solvent	Alkaline substrate such as new concrete	Contains small molecules that allow deep penetration; provides water repellency by bonding chemically with the substrate.	Silquest A-137, DowCorning Z-6341, Evonik OCTEO
Silico® WR0812	Solvent	Concrete	Protect reinforced concrete from chlorine attack	Wacker IO-TRIETHOXY, Silres BS 1701
Silico® WR0818	Cream	Concrete	Protect reinforced concrete from chlorine attack	Wacker Silres BS CREME C
Silico® WR0777	Water	Neutral, bricks, ceramics, Roof Tiles, Perlite, Vermiculite	Water-dilutable solution gives water repellency to a variety of substrates.	DowCorning OFS-0777, Wacker Silres BS16, Rhodia Siliconate 51T
Silico® WR0772	Water	Neutral, bricks, ceramics, Roof Tiles, Perlite, Vermiculite	Water-dilutable solution gives water repellency to a variety of substrates.	DowCorning OFS-0772.

Silicone Water Repellent

Products	Dilution	Substrate	Benefits	Equivalent
Silico® WR2020	Solvent	Gypsum	Hydrophobing treatment for plasterboard, plaster blocks, powders and granular materials.	Momentive TSF-484, Wacker Silres BS94, Rhodia Rhodoril H68, ShineTsu KF-99
Silico® WR1001	Water	Bricks, concrete, sand-lime brick, natural sandstone and mineral plasters	General purpose water repellents for impregnating and priming mineral surfaces.	Wacker Silres BS 1001
Silico® WR4004	Water	Bricks, sand-lime brick, natural sandstone and mineral plasters.	General purpose water repellents for impregnating and priming mineral surfaces. Excellent beading effect.	Wacker Silres BS 4004
Silico® WR1290	Solvent	Brickwork all kinds of concrete aerated concrete sand-lime brickwork cement fiberboards mineral plasters mineral-based natural and artificial stone mineral paints	General purpose impregnating and priming agent for mineral and strongly alkline substrates.	Wacker Silres BS 290
Silico® WR5050	Powder	Cementitious drymix applications, like concrete, stucco, plaster, grout, and mortar.	Easy to mix in powdered composition; Increase water repellency with no post-treatment required.	Evonik Siltren P-750 Dowsil GP SHP 50 BYK Optibent NT-10