MANTA



PRODUCT BROCHURE

Water Repellents

Silanes · Silicone emulsions · Siliconates · Fluoro-silanes
for concrete, masonry, stone, gypsum, coatings and glass

Advanced Silicone Science, Infinite Application.

Nanjing Manta New Material Co., Ltd.

ABOUT THE RANGE

Silicone water repellents for construction and industry



Manta supplies water repellents in these product families: alkyl silanes, silicone emulsions and fluids, methyl siliconates, and fluoroalkyl silanes.

They are used to impregnate concrete, masonry and natural stone, as integral additives in concrete, mortar, gypsum and dry-mix products, in architectural paints and renders, in mineral wool insulation and textiles, and to treat fillers, pigments, glass and ceramics.

This brochure gives the key data and typical uses of each grade to help you shortlist products. Full specifications, application instructions and safety information are in the technical data sheet (TDS) and safety data sheet (SDS) of each grade.

How silicone water repellents work

01 Penetrate

Low-viscosity silanes, siloxanes and siliconates are drawn into the capillary pores of concrete, masonry and stone, or are dispersed through the mix when used as admixtures.

02 React

Alkoxy groups hydrolyze with moisture and condense with each other and with hydroxyl groups of the mineral substrate. Siliconates react with carbon dioxide from the air.

03 Repel

The bonded alkyl or fluoroalkyl groups line the pore walls. Liquid water beads off and is not drawn in, while the pores stay open to water vapor.

Product families

Silanes & Alkyl Silanes

Monomeric alkyl silanes, C4 to C18, for deep impregnation and for surface treatment of fillers and pigments.

L310 L320 LB320 LO320 LO320E L1231 L1232 L1631 L1831

Silicone Emulsions & Fluids

Water-based silane/siloxane and resin emulsions, creams, a solvent-dilutable concentrate and a hydrogen fluid.

H101 EH101 EH102 WS101 WS170 WS120 WS130 WS136 WS360 WS370 WS290 WS450 WS100 WS513 WS180 WS600 WS400

Siliconates & Specialty Auxiliaries

Potassium and sodium methyl siliconates as liquids and powders, and a siliconate pH adjuster.

MSEP WR-P01 MSES WR-P02 WS114 WS115 WS168

Fluoro-Silanes & Superhydrophobic Coatings

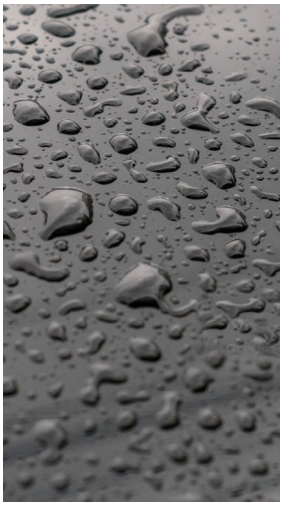
C8 and C10 fluoroalkyl silanes for water- and oil-repellent, easy-to-clean surfaces.

F1331 F1332 F1731 F1732

BENEFITS

What a hydrophobic treatment does

Silicone water repellents change the pore walls instead of forming a film on top, so the treated material keeps its look and stays open to water vapor. Effects reported in Manta TDS include:



01

Lower water absorption

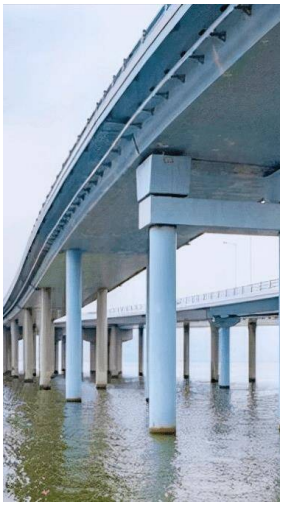
Capillary water uptake of concrete, brick and stone is reduced. WS130, for example, is specified at a 48 h water absorption ratio of ≤ 10%.



02

Vapor permeability retained

The pores are lined, not sealed, so moisture inside the wall or slab can still dry out.



03

Protection against chlorides

Less chloride ingress helps protect reinforcing steel. WS130 is specified at a chloride absorption reduction of ≥ 90%, WS120 at ≥ 80%.



04

Less efflorescence and soiling

Less water moving through the material means less salt transport, so efflorescence, staining and dirt pick-up can be reduced.



05

Freeze-thaw durability

Less water in the pores means less frost damage. WS130 shows no surface change after 20 freeze-thaw cycles (−20 to 20 °C).



06

Invisible treatment

Penetrating silanes and siloxanes leave no glossy film, so the color and texture of the substrate are kept.

PRODUCT OVERVIEW

Grades at a glance

Grades by family, with form and purity or active content. The last column gives the page of the product in this brochure.

Grade	Product	Form	Page
Silanes & Alkyl Silanes			
L310	n-Octyltrimethoxysilane	Liquid, purity ≥ 98.0%	6
L320	n-Octyltriethoxysilane	Liquid, purity ≥ 98.0%	6
LB320	Isobutyltriethoxysilane	Liquid, purity ≥ 98.0%	6
LO320	Isooctyltriethoxysilane	Liquid, purity ≥ 98.0%	7
LO320E	Isooctyltriethoxysilane cream (approx. 80%)	Paste, approx. 80% active	7
L1231	n-Dodecyltrimethoxysilane	Liquid, purity ≥ 98.0%	7
L1232	n-Dodecyltriethoxysilane	Liquid, purity ≥ 96.0%	7
L1631	n-Hexadecyltrimethoxysilane	Liquid, purity ≥ 95.0%	8
L1831	n-Octadecyltrimethoxysilane	Liquid (waxy solid below 17 °C)	8
Silicone Emulsions & Fluids			
H101	Methyl hydrogen silicone fluid (PMHS), H101-20 / H101-100	Liquid, H content ≥ 1.5% / 0.01–0.04%	9
EH101	Methyl hydrogen polysiloxane emulsion	Emulsion	9
EH102	Hydroxyl-terminated PDMS emulsion	Emulsion, approx. 50% active	9
WS101	Deep-penetrating silane emulsion concentrate	Emulsion, 43–58% active	9
WS170	Silicone waterproofing admixture	Emulsion, ≥ 40% active	10
WS120	Deep-penetrating silane cream (≥ 40% active)	Cream, ≥ 40% active	10
WS130	Nano-silane concrete impregnation	Liquid, ready to use	10
WS136	Silicone water-repellent additive for coatings	Emulsion, approx. 50% active	10
WS360	Silane/siloxane waterproofing emulsion	Emulsion, approx. 50% active	11
WS370	Fluorine-free water-repellent emulsion	Emulsion, weakly cationic	11
WS290	Silane/polysiloxane concentrate (100% active)	Liquid concentrate, 100% active	11
WS450	Silicone resin emulsion for architectural coatings	Emulsion, approx. 50% active	11
WS100	Silane/siloxane water-repellent emulsion	Emulsion, approx. 50% active	12
WS513	Silicone hydrophobing emulsion for mineral wool insulation	Emulsion, approx. 50% active	12
WS180	Silane/siloxane water-repellent emulsion	Emulsion, approx. 50% active	12
WS600	Reactive silicone resin emulsion for architectural coatings	Emulsion, approx. 50% active	12
WS400	Cationic silane/siloxane emulsion	Emulsion, approx. 50% active	13
Siliconates & Specialty Auxiliaries			
MSEP	Potassium methyl siliconate, aqueous solution	Aqueous solution, 30–52% solids	14
WR-P01	Potassium methyl siliconate powder	Powder, ≥ 98% solids	14
MSES	Sodium methyl siliconate, aqueous solution	Aqueous solution, 30 ± 2% solids	14
WR-P02	Sodium methyl siliconate powder	Powder, ≥ 90% solids	15
WS114	Alkali metal methyl siliconate concentrate (stone & masonry)	Aqueous solution, 30% solids	15
WS115	Alkali metal methyl siliconate concentrate	Aqueous solution, 30% solids	15
WS168	Methylsiliconate pH adjuster for architectural coatings	Aqueous solution, approx. 50% active	15
Fluoro-Silanes & Superhydrophobic Coatings			
F1331	1H,1H,2H,2H-Perfluorooctyltrimethoxysilane	Liquid, purity ≥ 97.0%	16
F1332	1H,1H,2H,2H-Perfluorooctyltriethoxysilane	Liquid, purity ≥ 97.0%	16
F1731	1H,1H,2H,2H-Perfluorodecyltrimethoxysilane	Liquid, purity ≥ 97.0%	16
F1732	1H,1H,2H,2H-Perfluorodecyltriethoxysilane	Liquid, purity ≥ 97.0%	17

SELECTION GUIDE

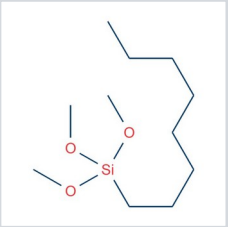
Which grade for which application

Typical starting points. Dosage, dilution and suitability depend on the substrate and the formulation; please test before use and follow the TDS of the grade.

Application	Grades	Notes
Reinforced concrete: bridges, piers, tunnels, harbors	**LO320E, WS120, WS130, LO320, WS101**	Silane paste or cream, ready-to-use silane, neat silane or diluted silane emulsion
Concrete, masonry and stone impregnation	**L310, L320, LB320, L1231, L1232, WS290**	Neat alkyl silanes; WS290 is diluted in hydrocarbon solvents
Facades: brick, clinker, sand-lime brick, natural stone, renders	**WS100, WS180, WS400, MSEP, WS114, WS115**	Water-based impregnants; siliconates react with CO2 from the air
Integral waterproofing of concrete and mortar	**WS170, WS360, EH102, WS100, WS180**	Added to the mix, dosage on cement or dry weight
Gypsum board, plaster and dry-mix products	**H101, EH101, WR-P01, WR-P02, MSES**	H101 and EH101 in gypsum slurry; powders for dry mixes
Clay brick, roof tiles, AAC	**MSES, MSEP, WS114, H101**	Dip treatment, spraying or integral mixing
Architectural paints, renders and plasters	**WS450, WS600, WS136, EH102, WS168**	Silicone resin binders and hydrophobic additives; WS168 adjusts pH
Mineral wool insulation	**WS513, EH101**	Added to the binder or applied to the fiber
Fillers, pigments and glass fiber	**L310, L320, LB320, LO320, L1631, L1831**	Surface treatment of ATH, MDH, silica, talc and pigments
Textiles and leather	**WS370, EH101**	WS370 is fluorine-free
Glass and ceramics: easy-to-clean, anti-fingerprint, anti-graffiti	**F1331, F1332, F1731, F1732**	Fluoroalkyl silanes are subject to regional chemical regulations; check suitability for your market

Silanes & Alkyl Silanes

Undiluted or solvent-diluted silanes for penetrating impregnation of concrete, masonry and stone, and for hydrophobic treatment of mineral fillers, pigments and glass fiber. Methoxy grades hydrolyze faster and release methanol; ethoxy grades release ethanol.



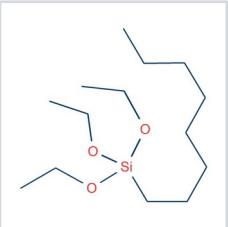
Manta L310

n-Octyltrimethoxysilane

CAS 3069-40-7

Manta L310 is n-octyltrimethoxysilane, an alkyl silane with a C8 chain and three methoxy groups that hydrolyze faster than ethoxy groups. It penetrates mineral substrates and forms a breathable siloxane network that reduces water absorption, freeze-thaw damage and chloride ingress; purity is ≥98.0% (GC). Used as a sealer or integral admixture for concrete and masonry, for treating silica, talc and glass fiber, and in easy-to-clean glass coatings.

Purity (GC), %	**≥ 98.0**	Density 20 °C, g/cm³	**0.902–0.912**
Refractive Index, 25 °C	**1.4120–1.4220**		



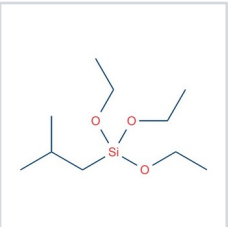
Manta L320

n-Octyltriethoxysilane

CAS 2943-75-1

Manta L320 is n-octyltriethoxysilane (INCI: triethoxycaprylylsilane), an alkyl silane with a C8 chain and three ethoxy groups. Its low molecular weight allows deep penetration into concrete and masonry, where it hydrolyzes, releasing ethanol, and bonds as an alkali-resistant siloxane network; purity is ≥98.0% (GC). Used for water-repellent impregnation, ATH and MDH filler treatment, and coating cosmetic pigments such as TiO2, zinc oxide and mica.

Purity (GC), %	**≥ 98.0**	Density 20 °C, g/cm³	**0.874–0.884**
Refractive Index, 25 °C	**1.4120–1.4220**		



Manta LB320

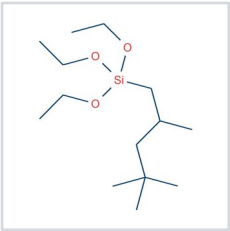
Isobutyltriethoxysilane

CAS 17980-47-1

Manta LB320 is isobutyltriethoxysilane, a silane with a branched isobutyl group and three ethoxy groups that release ethanol, not methanol, on hydrolysis. In fresh concrete it bonds as a hydrophobic network that cuts capillary water absorption and keeps vapor permeability; purity is ≥98.0% (GC). Uses are water repellents for concrete, brick and stone, Ziegler-Natta external donor for polypropylene, and ATH, silica and talc treatment.

Purity (GC), %	**≥ 98.0**	Density 20 °C, g/cm³	**0.8800 ± 0.0050**
Refractive Index, 25 °C	**1.4000 ± 0.0050**		

Silanes & Alkyl Silanes (continued)



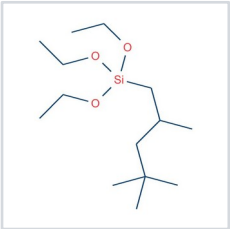
Manta LO320

Isooctyltriethoxysilane

CAS 35435-21-3

Manta LO320 is isooctyltriethoxysilane, a monomeric silane with a branched 2,4,4-trimethylpentyl group and three ethoxy groups that release ethanol on hydrolysis. The branched chain gives low volatility and alkali resistance, and the small molecule penetrates capillary pores to form a breathable hydrophobic network; purity is ≥98.0% (GC), flash point 63 °C. Used on concrete, masonry and stone, and to treat ATH, silica and TiO2.

Purity (GC), %	**≥ 98.0**	Density 20 °C, g/cm³	**0.879**
Refractive Index, 25 °C	**1.410**		



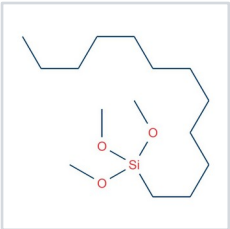
Active ingredient

Manta LO320E

Isooctyltriethoxysilane cream (approx. 80%)

Manta LO320E is a thixotropic white paste with about 80% isooctyltriethoxysilane for hydrophobic impregnation of reinforced concrete. It does not sag on vertical and overhead surfaces, penetrates 3–4 mm, and reduces capillary water absorption and chloride penetration by more than 90%. Typical uses are bridges, piers, tunnels, runways, seaports, dams, power plants and fair-faced concrete exposed to chlorides and freeze-thaw.

Active Content	**approx. 80%**	Appearance	**White paste**
Viscosity, 20 °C	**≥ 5000 mPa·s**	Coverage	**300 g/m²**



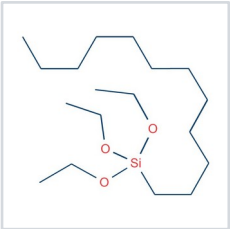
Manta L1231

n-Dodecyltrimethoxysilane

CAS 3069-21-4

Manta L1231 is n-dodecyltrimethoxysilane, an alkyl silane with a linear C12 chain and three methoxy groups that release methanol on hydrolysis. Compared with C8 or C10 silanes, the longer chain lowers volatility and gives a moderate, controlled penetration depth; purity is ≥98.0% (GC). Used for stone, masonry and concrete protection, heritage conservation, filler and pigment treatment, coatings, adhesives and sealants, and mold release.

Purity (GC), %	**≥ 98.0**	Density 20 °C, g/cm³	**0.885–0.895**
Refractive Index, 25 °C	**1.4220–1.4320**		



Manta L1232

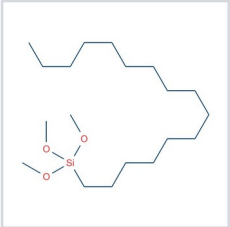
n-Dodecyltriethoxysilane

CAS 18536-91-9

Manta L1232 is n-dodecyltriethoxysilane, an alkyl silane with a linear C12 chain and three ethoxy groups. The ethoxy groups hydrolyze more slowly than methoxy groups and release ethanol, and the long chain gives strong hydrophobicity; purity is ≥96.0% (GC), flash point 110 °C. Used as a water repellent for stone, concrete and masonry, in heritage conservation, for filler treatment, in coatings and sealants, and as a mold release agent.

Purity (GC), %	**≥ 96.0**	Density 20 °C, g/cm³	**0.885–0.895**
Refractive Index, 25 °C	**1.4220–1.4320**		

Silanes & Alkyl Silanes (continued)



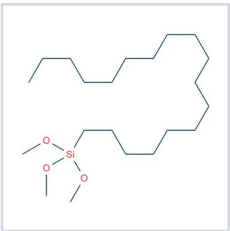
Manta L1631

n-Hexadecyltrimethoxysilane

CAS 16415-12-6

Manta L1631 is n-hexadecyltrimethoxysilane, an alkyl silane with a linear C16 chain and three methoxy groups. The methoxy groups bond to inorganic surfaces, while the non-polar C16 chain lowers surface energy and improves compatibility with polyolefins; purity is ≥95.0% (GC). Main uses are ATH and MDH treatment for HFFR cables, silane creams and emulsions for concrete, pigment dispersion, and glass fiber and mineral wool treatment.

Purity (GC), %	**≥ 95.0**	Density 20 °C, g/cm³	**0.89 ± 0.01**
Refractive Index, 25 °C	**1.4340–1.4440**		



Manta L1831

n-Octadecyltrimethoxysilane

CAS 3069-42-9

Manta L1831 is n-octadecyltrimethoxysilane, an alkyl silane with a linear C18 chain and three methoxy groups. The methoxy groups form covalent siloxane bonds with the substrate, while the C18 chain forms a dense water-repellent layer with very low volatility; purity is ≥92.0% (GC), and it may become a waxy solid below 17 °C. Used for ATH, MDH and silica treatment in polyolefins, superhydrophobic coatings, pigment dispersion and mold release.

Purity (GC), %	**≥ 92.0**	Density 20 °C, g/cm³	**approx. 0.883**
Refractive Index, 25 °C	**approx. 1.438–1.440**		



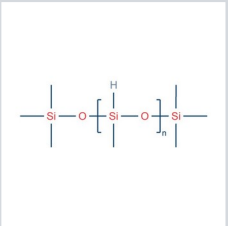
Concrete impregnation — LO320, L320, LB320



Masonry and stone — L310, L1231, L1232

Silicone Emulsions & Fluids

Water-reducible silane/siloxane emulsions, silane creams and silicone resin emulsions for impregnation, integral waterproofing, coatings and insulation, plus a solvent-dilutable concentrate and a methyl hydrogen silicone fluid.



Manta H101

Methyl hydrogen silicone fluid (PMHS), H101-20 / H101-100

Manta H101 is a series of reactive methyl hydrogen silicone fluids. H101-20 (≥1.5% hydrogen, 15–50 mPa·s) is a mass water repellent for gypsum at 0.1–0.5% on dry plaster and a crosslinker for platinum-cured LSR, RTV and HTV silicones; H101-100 (0.01–0.04% hydrogen, 20–500 mPa·s) is a chain extender in addition-cure LSR. Other uses: clay brick and tile, extinguisher powder coating, textile DWR and PU foam stabilizer synthesis.

Hydrogen Content	**≥1.5% / 0.01–0.04%**	Viscosity, 25 °C, mPa·s	**15–50 / 20–500**



Manta EH101

Methyl hydrogen polysiloxane emulsion

Manta EH101 is a water-based emulsion of methyl hydrogen polysiloxane with 30 ± 2% solids (other solid contents on request) and pH 4–6. Its Si-H bonds crosslink with zinc or tin catalysts and heat (150–180 °C) into a water-repellent film that keeps vapor permeability. Used in gypsum slurry for moisture-resistant plasterboard at 0.2–0.8% on dry weight, for textile water-repellent finishing, glass fiber, mineral wool and as a mold release agent.

Solid Content	**30 ± 2%**	pH	**4–6**
Appearance	**Milky white liquid**		



Manta EH102

Hydroxyl-terminated PDMS emulsion

Manta EH102 is a water-based emulsion of hydroxyl-terminated polydimethylsiloxane with about 50% active content and pH 6–7. Its silanol groups react with hydroxyl sites on the substrate, pigments and cement hydrates, giving water repellency and beading while keeping vapor permeability. Used at 0.5–2.0% in silicone resin renders and plasters, and at 0.25–1.0% on dry weight as an integral admixture for pavers, precast elements and dry-mix mortars.

Active Content	**approx. 50%**	pH	**6.0–7.0**
Density, g/cm³	**1.0**		



Manta WS101

Deep-penetrating silane emulsion concentrate

Manta WS101 is a concentrated emulsion of small-molecule silanes, supplied as a milky white liquid with 43–58% active solids. Diluted 1:4 to 1:9 with water, it penetrates several millimeters into dense concrete and forms a vapor-permeable hydrophobic zone that reduces water absorption, chloride ingress and freeze-thaw damage. Used on bridge barriers, piers, retaining walls, industrial floors, exterior renders and fair-faced concrete.

Active Solids, %	**43–58**	Appearance	**Milky, white liquid**

Silicone Emulsions & Fluids (continued)



Manta WS170

Silicone waterproofing admixture

Manta WS170 is a silane-based waterproofing admixture, a milky white aqueous dispersion with ≥40% active content and pH 5.0–7.0. In fresh cement the silanes hydrolyze and crosslink with the silicates, blocking capillary pores and lining them with alkyl groups; at 1.0–2.0% on cement, water absorption after 48 h immersion drops by over 85%. Used in concrete and mortar for bridges, tunnels, dams and precast blocks, and as a surface treatment.

Active Content	**≥ 40%**	pH	**5.0–7.0**



Manta WS120

Deep-penetrating silane cream (≥ 40% active)

Manta WS120 is a water-based thixotropic silane cream with ≥40% active content for hydrophobic impregnation of exposed concrete. Applied undiluted at about 300 g/m², it does not sag on vertical or overhead surfaces, penetrates 3–4 mm into dense concrete and reduces chloride absorption by ≥80%. Typical uses are bridge piers and soffits, overpasses, railway and tunnel linings, harbors and seawalls, fair-faced facades and cooling towers.

Active Content	**≥ 40%**	Viscosity, 20 °C	**≥ 4000 mPa·s**
Coverage	**300 g/m²**	Chloride Absorption Reduction	**≥ 80%**



Manta WS130

Nano-silane concrete impregnation

Manta WS130 is a nanoscale silane impregnation, supplied as a clear liquid, for heavy-duty protection of reinforced concrete. It reacts with moisture and the alkaline cement matrix to form a hydrophobic barrier, with penetration ≥3.0 mm, 48 h water absorption ratio ≤10% and chloride absorption reduction ≥90% per JTG/T B07-01-2006 and JTJ 275-2000. Used on seaports, highway bridges, viaducts, railways, tunnels and cooling towers.

Penetration Depth, mm	**≥ 3.0**	48 h Water Absorption Ratio, %	**≤ 10**
Chloride Absorption Reduction, %	**≥ 90**	Electric Flux after Treatment	**≤300 coulombs**



Manta WS136

Silicone water-repellent additive for coatings

Manta WS136 is a solvent-free aqueous emulsion of functional polyorganosiloxanes with about 50% active content and pH about 9. Added at 1.0–5.0% of the total formulation, at let-down or as a post-addition, it reduces capillary water uptake and gives a water-beading effect while keeping vapor permeability. Used in silicate paints, synthetic resin dispersion paints, masonry coatings, stucco and primers.

Active Content	**approx. 50% by weight**	pH	**approx. 9**
Density 20 °C, g/cm³	**approx. 1**		

Silicone Emulsions & Fluids (continued)



Manta WS360

Silane/siloxane waterproofing emulsion

Manta WS360 is a solvent-free, water-reducible emulsion of organically modified silanes and siloxanes with about 50% active content. It is stable in the alkaline environment of fresh cement and reduces capillary water absorption while keeping vapor permeability. Used mainly as an integral waterproofing admixture for concrete at 0.1–1.0% neat on cement weight, or 1.0–5.0% after 1:4 dilution, and for topical impregnation of cured concrete.

Active Content, %	**approx. 50**	Density 20 °C, g/cm³	**approx. 0.95**



Manta WS370

Fluorine-free water-repellent emulsion

Manta WS370 is a fluorine-free, silicone-modified water-repellent emulsion with nanometer particle size, weakly cationic, with pH 4–7. On fabrics padded at 30–80 g/L and cured at 150–180 °C for 0.5–3 min it gives water droplet roll-off with a soft, drapable hand; adding 6–10 g/L crosslinker improves wash durability. Used for durable water-repellent finishing of outdoor apparel, technical fabrics and leather.

pH	**4–7**	Ionic Type	**Weakly cationic**
Appearance	**Translucent milky white liquid**		



Manta WS290

Silane/polysiloxane concentrate (100% active)

Manta WS290 is a solvent-free, 100% active concentrate of silanes and modified polysiloxanes with a density of 0.97 g/cm³. Diluted 1:9 to 1:14 in aliphatic, aromatic or dearomatized hydrocarbon solvents, it penetrates mineral substrates, including slightly damp or alkaline ones, and gives water repellency and beading. Used to make solvent-borne impregnants for brick, natural stone, concrete and plasters, and hydrophobic primers for paints.

Active Content, %	**100**	Density 20 °C, g/cm³	**0.97**
Appearance	**Light yellow liquid**		



Manta WS450

Silicone resin emulsion for architectural coatings

Manta WS450 is a solvent-free aqueous emulsion of a modified polysiloxane resin with about 50% active content. It forms a microporous silicone resin network with water repellency, early rain resistance, high vapor permeability and low dirt pick-up, and is stable in alkaline silicate systems. Used at 4.0–10.0% in silicone resin paints, 2.0–6.0% in silicone resin plasters and 2.0–4.0% in silicone-modified acrylic paints and SiSi plasters.

Active Content, %	**approx. 50**	Density 20 °C, g/cm³	**approx. 1**
Appearance	**Milky white liquid**		

Silicone Emulsions & Fluids (continued)



Manta WS100

Silane/siloxane water-repellent emulsion

Manta WS100 is a solvent-free emulsion of silane and modified polysiloxane with about 50% active content. Diluted 1:4 to 1:9 with water, it penetrates mineral substrates and gives early water resistance, water beading and reduced efflorescence while keeping vapor permeability. Used in water-based impregnants for clay brick, clinker, sand-lime brick, natural stone and plasters, in hydrophobic primers, and at 0.1–1.0% on cement.

Active Content, %	**approx. 50**	Density 20 °C, g/cm³	**approx. 0.95**
Appearance	**Milky white or white liquid**		



Manta WS513

Silicone hydrophobing emulsion for mineral wool insulation

Manta WS513 is a solvent-free aqueous emulsion of functional polysiloxanes with about 50% active content. It is compatible with phenolic resin binders and is added directly to the binder mix under gentle stirring, giving long-lasting water repellency to the finished insulation while keeping vapor permeability. Used at 0.5–1.0% on binder weight in rock wool, glass wool and other mineral fiber acoustic and thermal insulation.

Active Content, %	**approx. 50**	Density 20 °C, g/cm³	**approx. 1**
Appearance	**Milky white liquid**		



Manta WS180

Silane/siloxane water-repellent emulsion

Manta WS180 is a solvent-free emulsion of reactive silanes and modified polysiloxanes with about 50% active content. Diluted 1:4 to 1:9 with water, it penetrates porous mineral substrates and gives early water resistance, strong beading, low dirt pick-up and less salt efflorescence. Used for fired brick, clinker, sand-lime brick, natural stone and mineral plasters, in hydrophobic primers, and at 0.1–1.0% on cement in concrete and mortar.

Active Content, %	**approx. 50**	Density 20 °C, g/cm³	**approx. 0.95**
Appearance	**Milky white liquid**		



Manta WS600

Reactive silicone resin emulsion for architectural coatings

Manta WS600 is a solvent-free aqueous emulsion of a reactive modified polysiloxane resin with about 50% active content and pH about 9. It forms a microporous silicone resin network with water repellency, early rain resistance, high vapor permeability and low dirt pick-up. Typical dosages are 4.0–10.0% in silicone resin paints, 2.0–6.0% in silicone resin plasters and 2.0–4.0% in silicone-modified acrylic paints and SiSi plasters.

Active Content, %	**approx. 50**	Density 20 °C, g/cm³	**approx. 1**
pH	**approx. 9**		

Silicone Emulsions & Fluids (continued)



Manta WS400

Cationic silane/siloxane emulsion

Manta WS400 is a solvent-free cationic emulsion of reactive silanes and modified polysiloxanes with about 50% active content and pH 4.0–6.0. Its cationic charge makes it substantive on mineral surfaces, giving fast early water resistance and beading. Diluted 1:4 to 1:9 with deionized water, it is used for surface impregnation of fired brick, clinker, sand-lime brick, natural stone and mineral renders; it is not for use as a concrete admixture.

Active Content, %	**approx. 50**	Density 20 °C, g/cm³	**approx. 1**
pH	**approx. 4.0–6.0**		



Silicone resin renders and paints — WS450, WS600, EH102



Pavers and precast elements — EH102



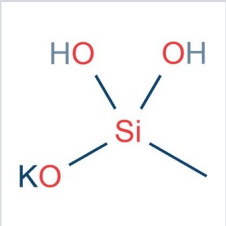
Concrete decks and slabs — WS101, WS130



Water beading on a treated surface

Siliconates & Specialty Auxiliaries

Alkaline methyl siliconates react with carbon dioxide from the air to form an insoluble polymethylsiloxane network inside the pores. Supplied as aqueous solutions, as powders for dry-mix products, and as a pH adjuster for paints.



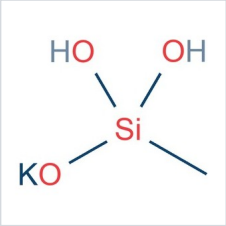
Manta MSEP

Potassium methyl siliconate, aqueous solution

CAS 31795-24-1

Manta MSEP is an aqueous potassium methyl siliconate solution with 30%, 40%, 50% or 52% solids and pH 13. It reacts with atmospheric CO_2 to form an insoluble polymethylsiloxane network that cuts water absorption while keeping vapor permeability; the potassium base lowers the risk of efflorescence compared with sodium siliconates. Used on stone, terracotta, brick and exposed concrete, in silicate paints, drilling fluids and wood treatment.

Solid Content	**Customizable; typically 30%, 40%, 50% or 52% (± 2%)**	Specific Gravity, 25 °C	**1.30**
pH	**13**		

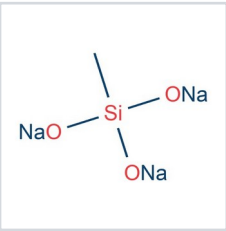


Manta WR-P01

Potassium methyl siliconate powder

Manta WR-P01 is a solid silicone water repellent based on potassium methyl siliconate. With water and atmospheric carbon dioxide, the siliconate converts into an insoluble polymethylsiloxane network that reduces capillary water absorption while keeping vapor permeability; the potassium base lowers the risk of white efflorescence compared with sodium siliconates. Used for water-repellent treatment of porous mineral building materials.

Solid Content	**≥ 98%**	$CH_3SiO_{1.5}$ Content	**70%**
pH (10% solution)	**12–13**		



Manta MSES

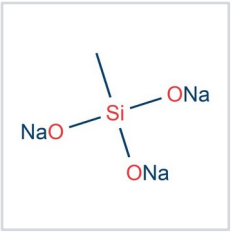
Sodium methyl siliconate, aqueous solution

CAS 16589-43-8

Manta MSES is an aqueous sodium methyl siliconate solution with 30% solids, pH ≥13 and a viscosity of 8–15 mm²/s. With water and atmospheric CO_2 it forms methylsilicic acid, which condenses into an insoluble polymethylsiloxane resin in the capillaries. Used for dip treatment or integral mixing of fired clay bricks, roof tiles, AAC, gypsum and perlite boards, for concrete in tunnels, dams and tanks, and as a shale inhibitor in drilling fluids.

Solid Content, %	**30% ± 2%**	pH	**≥13**
Silsesquioxane Content, %	**≥12**	Alkali Content, %	**5–10**

Siliconates & Specialty Auxiliaries (continued)



Manta WR-P02

Sodium methyl siliconate powder

CAS 16589-43-8

Manta WR-P02 is a solid silicone water repellent based on sodium methyl siliconate. With water and atmospheric carbon dioxide, the siliconate forms methylsilicic acid, which condenses into an insoluble polymethylsiloxane resin in the capillaries of the material, reducing water uptake while keeping vapor permeability. Used for integral water-repellent treatment of mineral building materials such as dry-mix mortars, tile grouts, wall putties and gypsum.

Solid Content	**≥ 90%**	$CH_3SiO_{1.5}$ Content	**≥ 50%**
pH	**12–14**		



Manta WS114

Alkali metal methyl siliconate concentrate (stone & masonry)

Manta WS114 is a concentrated aqueous solution of alkali metal methyl siliconate with 30% solids, ≥20% polymethylsilsesquioxane yield and pH ≥12.5. Diluted 1:10 to 1:15 with water, it reacts with atmospheric CO_2 to form an insoluble water-repellent barrier that keeps appearance and breathability. Used on natural and artificial stone, brickwork, roof tiles, gypsum board and fair-faced concrete, and as an additive in water glass.

Total Solids	**30%**	Polymethylsilsesquioxane Yield	**≥ 20%**
pH	**≥12.5**	Alkali Content, %	**8–10**



Manta WS115

Alkali metal methyl siliconate concentrate

Manta WS115 is a concentrated aqueous solution of alkali metal methyl siliconate with 30% total solids, 20% active substance and pH 13. Diluted to ≤3% active, it reacts with carbon dioxide and moisture to form an insoluble polymethylsilsesquioxane network that repels water but keeps vapor permeability. Applied by spray, brush, dipping or as a concrete admixture on stone, brick, unglazed ceramics, concrete, mortar and gypsum board.

Total Solids	**30%**	Active Substance	**20%**
pH	**13**	Specific Gravity, 25 °C	**1.1**



Manta WS168

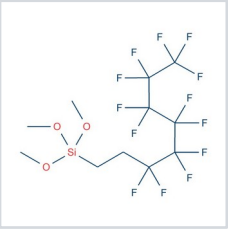
Methylsiliconate pH adjuster for architectural coatings

Manta WS168 is an aqueous solution of methylsiliconates with about 50% active content, a density of about 1.4 g/cm³ and pH 13.0–14.0. Pre-diluted 1:3 with water and added slowly, it sets and holds the pH of emulsion paints, typically at 9.5, and its silicone part raises the water repellency and scrub resistance of the film. Used in waterborne architectural paints, plasters and primers instead of volatile amines such as AMP or ammonia.

Active Content, %	**approx. 50**	Density, 25 °C, g/cm³	**approx. 1.4**
pH	**13.0–14.0**		

Fluoro-Silanes & Superhydrophobic Coatings

Fluoroalkyl silanes bond to glass, ceramics, stone and metal oxides as a thin, low-surface-energy layer that repels both water and oil. Used for easy-to-clean, anti-fingerprint and anti-graffiti treatments.



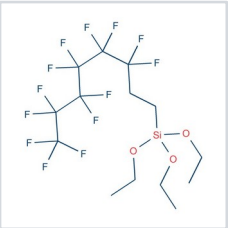
Manta F1331

1H,1H,2H,2H-Perfluorooctyltrimethoxysilane

CAS 85857-16-5

Manta F1331 is 1H,1H,2H,2H-perfluorooctyltrimethoxysilane, a silane with a tridecafluorooctyl chain and three methoxy groups. It bonds to hydroxylated inorganic surfaces as an ultra-thin, low-surface-energy layer that repels water and oil; purity is ≥97.0% (GC). Used in rain repellents, easy-to-clean glass and ceramics, anti-fingerprint coatings for displays, fluoropolymer adhesion and anti-graffiti treatment.

Purity (GC), %	**≥ 97.0**	Density 20 °C, g/cm³	**1.453 ± 0.005**
Refractive Index, 25 °C	**1.335 ± 0.005**		



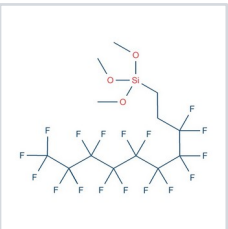
Manta F1332

1H,1H,2H,2H-Perfluorooctyltriethoxysilane

CAS 51851-37-7

Manta F1332 is 1H,1H,2H,2H-perfluorooctyltriethoxysilane, a fluoroalkyl silane with three ethoxy groups that release ethanol instead of methanol on hydrolysis. It bonds to inorganic substrates as a thin layer that repels water, oil, dirt and paint without changing optical clarity; purity is ≥97.0% (GC). Used in anti-graffiti coatings, car glass rain repellents, easy-to-clean ceramics and shower glass, and anti-fingerprint coatings.

Purity (GC), %	**≥ 97.0**	Density 20 °C, g/cm³	**approx. 1.330**
Refractive Index, 25 °C	**approx. 1.344**		



Manta F1731

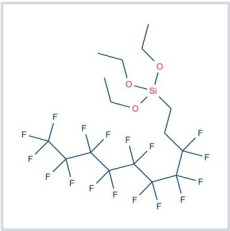
1H,1H,2H,2H-Perfluorodecyltrimethoxysilane

CAS 83048-65-1

Manta F1731 is 1H,1H,2H,2H-perfluorodecyltrimethoxysilane, a fluoroalkyl silane with a heptadecafluorodecyl chain and three methoxy groups. It bonds covalently to hydroxyl-containing substrates as a very low-surface-energy layer that repels water and oil; purity is ≥97.0% (GC). Used in anti-fingerprint coatings for screens, AR/VR lenses and glass protectors, on camera lenses, optical filters and LiDAR sensors, and in nano-imprint release layers.

Purity (GC), %	**≥ 97.0**	Density 20 °C, g/cm³	**1.5 ± 0.1**
Refractive Index, 25 °C	**approx. 1.325**		

Fluoro-Silanes & Superhydrophobic Coatings (continued)



Manta F1732

1H,1H,2H,2H-Perfluorodecyltriethoxysilane

CAS 101947-16-4

Manta F1732 is 1H,1H,2H,2H-perfluorodecyltriethoxysilane, a fluoroalkyl silane with three ethoxy groups that release ethanol on hydrolysis. It bonds to glass, ceramics and metal oxides as a nanometer-thin layer with a water contact angle above 110° and surface energy below 15 mN/m; purity is ≥97.0% (GC). Used in anti-fingerprint coatings for screens and lenses, stone sealers, car glass, metal and textile treatment, and solar and shower glass.

Purity (GC), %	**≥ 97.0**	Density 20 °C, g/cm³	**1.384 ± 0.005**
Refractive Index, 25 °C	**1.340 ± 0.005**		



Water- and oil-repellent surfaces — F1331, F1332



Low surface energy: water stays as droplets

Regulatory note

Fluoroalkyl silanes are subject to regional chemical regulations, for example EU restrictions on PFOA- and PFHxA-related substances. Please confirm that the grade is permitted for your market and application before use.

APPLICATION

Applying penetrating water repellents

1 Prepare

Remove dirt, laitance, oil, coatings and loose material. Repair cracks and defects first. The surface should be dry.

2 Test

Treat a trial area to check absorption, coverage and appearance before the full application.

3 Apply

Brush, roller or low-pressure or airless spray. Apply 1–2 coats; apply the next coat when the previous coat is dry, unless the TDS states otherwise.

4 Cure

Work in dry weather at 5–40 °C and protect from rain while drying. Full curing of silane creams takes 7 days or more.

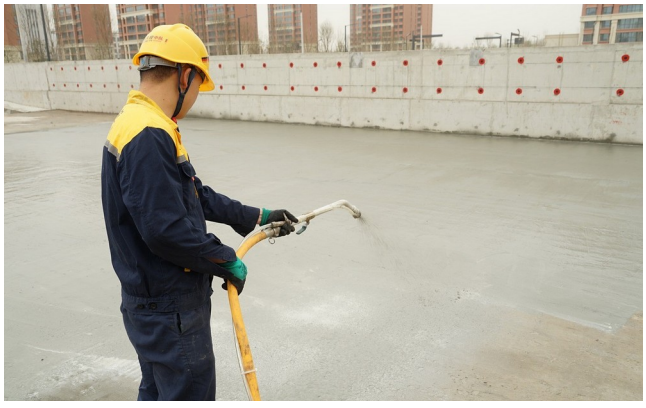
Typical dosage and dilution

Grade	Use	Dosage or dilution	Method
LO320E	Concrete impregnation	300 g/m², undiluted	Brush, roller, airless spray
WS120	Concrete impregnation	300 g/m², undiluted	Brush, roller, airless spray
WS101	Concrete and render impregnation	Diluted 1:4 to 1:9 with water	Spray, brush, roller
WS100 / WS180	Facade impregnation	Diluted 1:4 to 1:9 with water	Spray, brush, roller
WS290	Solvent-borne impregnants	Diluted 1:9 to 1:14 in hydrocarbon solvent	Spray, brush, roller
WS114	Stone, brick, roof tiles	Diluted 1:10 to 1:15 with water	Spray, brush, dipping
WS170	Concrete and mortar admixture	1.0–2.0% on cement	Added to the mix
WS136	Paints, stucco, primers	1.0–5.0% of the total formulation	Let-down or post-addition
WS450 / WS600	Silicone resin paints	4.0–10.0% (paints), 2.0–6.0% (plasters)	Added as binder
WS168	Emulsion paints (pH adjuster)	Pre-diluted 1:3 with water	Added slowly while stirring

Starting values from the TDS of each grade. Determine the final dosage by trials on the actual substrate or formulation.



Roller application



Low-pressure spray application

PACKAGING, STORAGE AND SERVICE

Supply and support

Packaging

- Liquid silanes: pails, drums and IBCs
- Emulsions and siliconate solutions: pails, drums and IBCs
- Silane creams and pastes: barrels
- Siliconate powders: 25 kg bags
- Fluoro-silanes: bottles, pails and drums
- Pack sizes per grade are given in the TDS; other packs on request

Storage

- Store in tightly closed original containers in a cool, dry place, away from direct sunlight
- Protect water-based products from frost
- Shelf life 12 to 24 months depending on the grade, see the TDS

Safety

- Read the SDS before handling
- Alkoxysilanes release methanol (methoxy grades) or ethanol (ethoxy grades) on hydrolysis
- Siliconates are strongly alkaline

Quality and documents

- ISO 9001:2015 certified quality management system
- TDS, SDS and COA available for each grade on request
- Samples available for evaluation







To select a grade, please tell us

1. Substrate or material to be treated
2. Use: impregnation, admixture, coating or treatment
3. Water-based or solvent-based system
4. Required appearance and penetration
5. Local regulations (VOC, methanol, fluorine)
6. Quantity and packaging

The information in this brochure is given in good faith and based on our current knowledge. Values are typical unless stated as specifications and do not form part of a sales specification. Users should test the products to determine their suitability for the intended use. The latest TDS and SDS of each grade apply.

MANTA



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