MANTA

Technical Data Sheet

Version: 1.0

Manta F1331

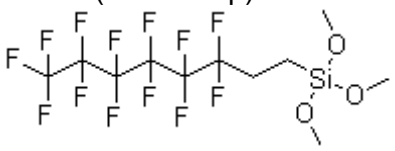
Fluoroalkyl-Functional Silane

Description

Manta F1331 is a reactive fluoroalkyl-functional silane designed to deliver extreme liquid repellency and low surface energy. It is highly miscible and can be readily diluted to the desired application concentration in a wide range of organic solvents, including ethanol, n-hexane, xylene, acetone, and ethyl acetate.

Due to its specialized fluorinated carbon chain, Manta F1331 chemically bonds to inorganic substrates to form an ultra-thin, highly durable protective layer. This nano-layer exhibits outstanding hydrophobic (water-repellent) and oleophobic (oil-repellent) properties, making it an ideal choice for advanced surface modifications.

Typical Physical Properties

Manta Code:	F1331
Chemical Name:	1H,1H,2H,2H-Perfluorooctyltrimethoxysilane
Synonyms:	Trimethoxy(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)silane
CAS No. :	85857-16-5
EINECS No. :	288-657-1
Molecular Weight:	468.28
Appearance:	Colorless transparent liquid
Purity (by GC, %):	97.0 min
Density (20°C, g/cm3):	1.453±0.005
Refractive Index (nD 25°C):	1.335±0.005
Boiling Point:	88°C/13 mmHg
Flash Point:	>65°C (closed cup)
Chemical Structure:	

Properties

A highly reactive bifunctional silane possessing hydrolyzable inorganic methoxysilyl groups and a low-surface-energy fluoroalkyl chain.

Applications

1. 1. Easy-to-Clean & Anti-Smudge Coatings (Glass & Ceramics)

Acts as a surface modifier on hydroxyl-functional substrates like glass and ceramics.

Imparts extreme hydrophobic and oleophobic properties.

Typical uses: Automotive windshield treatments (rain repellents), shower cabin glass, and self-cleaning sanitary ceramics.

2. Anti-Fingerprint (AF) Coatings for Displays & Optics

An active ingredient for formulating anti-fingerprint (AF) and easy-to-clean coatings.

Widely used on smartphone touch screens, optical lenses, and electronic displays to ensure natural oils and smudges can be easily wiped away.

3. Adhesion Promoter for Fluoropolymers

Functions as a highly specialized coupling agent to improve adhesion between inorganic substrates (metals, glass) and very inert fluoropolymers (e.g., PTFE, fluorosilicones, fluoroelastomers).

4. Anti-Graffiti & Protection for Mineral Substrates

Penetrates porous mineral surfaces (concrete, natural stone) to create an invisible, breathable barrier against water, oil, and harsh chemicals.
Prevents spray paints or permanent markers from bonding to the surface, making it an ideal anti-graffiti treatment for architectural facades.

Packaging

In 500g, 1000g, 25kg pail, 200kg drum.

Safety and Storage

Keep in a cool and dry place and avoid storage in direct sunlight. Shelf life is min. 9 months. It is shipped as non-hazardous substance.

Contact Information

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