MANTA

Technical Data Sheet

Version: 1.0

Manta F1332

Fluoroalkyl-Functional Silane (Ethoxy-based)

Description

Manta F1332 is a high-performance fluoroalkyl-functional silane, chemically identified as 1H,1H,2H,2H-perfluorooctyltriethoxysilane. Featuring a highly fluorinated carbon chain, this product is specifically designed to impart high liquid repellency and significantly reduce surface energy on various inorganic substrates.

Distinguished by its ethoxy reactive groups, Manta F1332 offers a significant environmental and safety advantage over its methoxy-based counterparts. Upon reaction with atmospheric moisture, it liberates ethanol instead of methanol, making it a lower-toxicity, eco-friendly alternative. This makes Manta F1332 the ideal choice for formulations intended for manual spraying, indoor applications, or consumer-facing products.

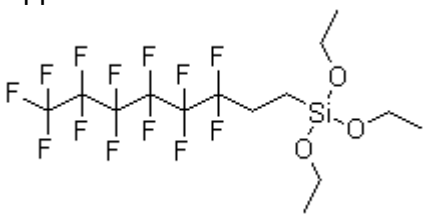
Once applied, it covalently bonds to the substrate to form a durable, ultra-thin (monomolecular), and breathable protective layer. The treated surface exhibits exceptional hydrophobic and oleophobic (water- and oil-repellent) properties. It effectively prevents the adhesion of water, oils, dirt, and paints, delivering superior "easy-to-clean," anti-smudge, and anti-graffiti performance without altering the substrate's optical clarity or original appearance.

Equivalent grade: Evonik Dynasylan® F 8261.

Typical Physical Properties

Manta Code:	F1332
Chemical Name:	1H,1H,2H,2H-Perfluorooctyltriethoxysilane
Synonyms:	Triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)silane
CAS No. :	51851-37-7
EINECS No. :	257-473-3
Appearance:	Colorless transparent liquid
Purity (by GC, %):	97.0 min
Density (ρ20°C, g/cm³):	Approx. 1.330
Refractive Index (nD 25°C):	Approx. 1.344

Chemical Structure:



Applications

1. Architectural Anti-Graffiti & Masonry Protection

An active ingredient for formulating invisible anti-graffiti coatings on porous mineral substrates (concrete, natural stone, brickwork).

Creates a highly oleophobic (oil-repellent) barrier that prevents spray paints, permanent markers, and environmental pollutants from penetrating the pores.

2. Automotive Glass & Rain Repellents

Widely used to formulate high-performance "rain repellent" treatments for automotive windshields and exterior mirrors. Significantly increases the water contact angle, allowing rain to bead up and roll off easily at driving speeds, improving driver visibility.

Ideal for consumer-grade DIY car care products due to its safer ethanol release during curing.

3. Easy-to-Clean Sanitary Ceramics & Shower Glass
Provides long-lasting hydrophobic and oleophobic surface modification for shower cabins, sanitary ceramics, and bathroom tiles. Prevents the severe adhesion of limescale, soap scum, and body oils, significantly reducing cleaning frequency and the need for harsh cleaning chemicals.

4. Optical Lenses & Display Anti-Smudge Coatings
Serves as an excellent ultra-thin (nanoscale) coating for optical lenses, camera covers, and electronic touch screens. Delivers outstanding anti-fingerprint (AF) and anti-smudge properties without compromising optical clarity, light transmittance, or the original tactile feel of the glass.

5. Sol-Gel Systems & Specialty Formulations
Functions as a highly effective surface energy-reducing additive in alcohol-based or water-based sol-gel coating systems to enhance overall liquid repellency.

Packaging
In 20kg pail, 180kg drum and 900kg IBC

Safety and Storage
Keep in a cool and dry place and avoid storage in direct sunlight. Shelf life is 12 months. Not regulated as dangerous goods for transport; refer to the Safety Data Sheet for hazard classification and safe handling.

Contact Information
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