MANTA

Technical Data Sheet

Version: 1.0

Manta F1731

Fluoroalkyl-Functional Silane (AF Agent)

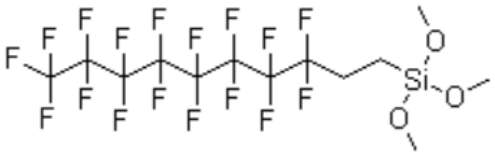
Description

Manta F1731 is a reactive fluoroalkyl silane, chemically identified as 1H,1H,2H,2H-perfluorodecyltrimethoxysilane. With a very long fluorinated carbon chain, it is designed to create durable, ultra-low surface energy coatings by covalently bonding to hydroxyl-containing substrates.
Upon proper application, Manta F1731 provides extreme hydrophobicity and oleophobicity (water and oil repellency). Treated surfaces exhibit outstanding anti-fingerprint (AF), easy-to-clean, and anti-contamination performance, making it well suited for surface modification where maximum liquid repellency and durability are required.
Equivalent grade: Shin-Etsu KBM-7803.

Typical Physical Properties

Manta Code:	F1731
Chemical Name:	1H,1H,2H,2H-Perfluorodecyltrimethoxysilane
Synonyms:	3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl(trimethoxy)silane
CAS No. :	83048-65-1
EINECS No. :	617-434-7
Appearance:	Colorless transparent liquid
Purity (by GC, %):	97.0 min
Density (20°C, g/cm3):	1.5±0.1
Refractive Index (nD 25°C):	Approx. 1.325

Chemical Structure:



Applications

1) Anti-Fingerprint (AF) Displays: An active ingredient for formulating ultra-durable, anti-smudge coatings on smartphone screens, AR/VR lenses, and tempered glass protectors.
2) Precision Optics & Sensors: Imparts extreme water and oil repellency to camera lenses, optical filters, and automotive LiDAR sensors, reducing signal distortion from water drops or contaminants.
3) Superhydrophobic Surface Treatments: Creates robust, low-surface-energy barriers on glass and ceramics, delivering extreme easy-to-clean and anti-contamination performance for harsh environments.
4) Nano-Release Coatings: Functions as a highly specialized, monomolecular release agent in nano-imprint lithography and precision microfluidic devices due to its extreme oleophobicity and ultra-low surface energy.

Packaging

In 1kg fluorinated bottle, 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.
Storage beyond the shelf life does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance

reasons.

Contact Information

Nanjing Manta New Material Co., Ltd
Add: Room 102-247, Building 17, No. 1 Qiliqiao North Road, Nanjing Area of the China (Jiangsu) Pilot Free Trade Zone, Nanjing, China
Factory: Miaoguan Town Industrial Park, Sishui County, Jining City, Shandong Province, China
Mob: +86 18961071292
Mail: inquiry@mantasil.com Web: www.mantasil.com