MANTA

**Technical Data Sheet**

Version: 1.0

# Manta L1631

Long-Chain Alkyl Functional Silane (C16)

## Description

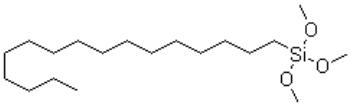
Manta L1631 is a monomeric long-chain alkylfunctional silane, chemically identified as n-hexadecyltrimethoxysilane. Featuring a very long 16-carbon (C16) linear alkyl chain, this silane exhibits strong hydrophobicity and outstanding lipophilicity (affinity for non-polar matrices).

Due to its highly non-polar C16 structure, Manta L1631 significantly reduces the surface energy of treated substrates. This makes it well suited as a surface modifier for inorganic fillers, pigments, and glass fibers, ensuring good dispersion and compatibility within non-polar polymer matrices (such as polyolefins).

Meanwhile, its highly reactive methoxy groups ensure rapid hydrolysis and efficient chemical bonding to inorganic surfaces. Its high molecular weight also translates to very low volatility, high thermal stability, and long-lasting performance even under demanding processing conditions.

Equivalent to Industry Standards: Evonik Dynasylan® 9116, Wacker GENIOSIL® HDTM-T

## Typical Physical Properties

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|---|---|
| Manta Code: | L1631 |
| Chemical Name: | N-Hexadecyltrimethoxysilane |
| Synonyms: | Trimethoxyhexadecylsilane |
| CAS No. : | 16415-12-6 |
| EINECS No. : | 240-464-3 |
| Appearance: | Colorless transparent liquid |
| Purity (by GC, %): | 95.0 min |
| Density (ρ20°C, g/cm3): | 0.89±0.01 |
| Refractive Index (nD 25°C): | 1.4340–1.4440 |
| Chemical Structure: |  |

## Applications

1. Surface Modifier for Mineral Fillers (Plastics & HFFR Cables)

Acts as a highly efficient surface treatment agent for inorganic flame retardants, such as ATH (Aluminum Trihydroxide) and MDH (Magnesium Dihydroxide).

Significantly improves the dispersion and compatibility of highly loaded fillers within non-polar polymer matrices (e.g., PE, PP, EVA).

Widely used in the production of Halogen-Free Flame Retardant (HFFR) cables, enhancing melt flow processability, reducing compound viscosity, and preserving the mechanical properties of the final product.

2. Active Ingredient for Silane Creams & Emulsions (Concrete Protection)

Serves as an excellent active base material for formulating VOC-compliant silane creams/gels and water-based water repellent emulsions.

Due to its very low volatility and slow evaporation rate, it ensures a longer dwell time on the substrate surface, allowing for deeper penetration into high-density concrete and infrastructure without significant evaporation loss.

3. Pigment Dispersion & Color Masterbatches

Significantly lowers the surface energy of inorganic pigments (such as titanium dioxide and iron

oxides), facilitating rapid wetting and superior dispersion in non-polar media.
Helps formulators achieve higher pigment loading, lower processing viscosity, and enhanced color strength.

4. Treatment for Glass Fibers & Mineral Wool
Imparts excellent, long-lasting water resistance to glass fibers and mineral wool.
Improves the resin wet-out process and enhances interfacial adhesion between the inorganic fibers and organic resin matrices.

## Packaging

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

## Safety and Storage

Store in a cool, dry, and well-ventilated area away from direct sunlight and moisture. Keep containers hermetically sealed at all times.
Shelf Life & Transport: 12 months from the date of manufacture when stored properly. 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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