MANTA

Technical Data Sheet

Version: 1.0

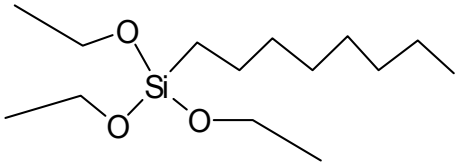
Manta L320

Alkyl functional organosilane

Description

Manta L320 is a monomeric alkyl-functional organosilane. Formulated as a clear, undiluted N-octyltriethoxysilane, it features a low molecular weight that enables deep penetration into porous cementitious and mineral substrates. In the presence of ambient moisture and an alkaline or acidic environment, the ethoxy groups hydrolyze to form reactive silanols, which subsequently chemically bond to the substrate. The resulting octyl-functional siloxane network provides durable, invisible water repellency without altering the substrate's natural breathability or appearance.
Performance equivalent to Momentive A-137, Dow OFS-6341, Evonik Dynasylan® OCTEO and Shin-Etsu KBE-3083.

Typical Physical Properties

Manta Code:	L320
Chemical Name:	N-Octyltriethoxysilane
Synonyms:	Triethoxyoctylsilane
INCI Name (Cosmetics) |	Triethoxycaprylylsilane
CAS No. :	2943-75-1
EINECS No. :	220-941-2
Appearance:	Colorless transparent liquid
Purity (by GC, %):	98.0 min
Specific Gravity (ρ20°C, g/cm^3):	0.874 ~ 0.884
Refractive Index (nD 25°C):	1.4120 ~ 1.4220
Chemical Structure:	

Properties

1) Exceptional Hydrophobicity: Creates a durable, chemically bonded water-repellent barrier in mineral substrates, significantly inhibiting capillary water absorption.
2) Deep Penetration: Low viscosity and small molecular size ensure excellent depth of penetration into concrete and masonry.
3) Filler Modification: Significantly improves the compatibility, wetting, and dispersion of polar mineral fillers in non-polar polymer matrices (polyolefins, rubbers).
4) High Alkali Resistance: The functional siloxane network demonstrates outstanding stability in highly alkaline environments (e.g., freshly cast concrete).

Applications

1. Architectural Waterproofing: When appropriately diluted in organic solvents, L320 serves as a high-performance penetrating water repellent for concrete, brick, and natural stone, protecting structures from freeze-thaw damage and chloride ion ingress.
2. Inorganic Powder Surface Treatment: Acts as a highly efficient surface modifier for mineral fillers (e.g., ATH, MDH, magnesium oxide) to reduce viscosity and improve the mechanical properties of highly filled polymer compounds.
3. Cosmetics & Personal Care: Operating under the INCI name Triethoxycaprylylsilane, L320 is widely utilized as a surface treating agent for cosmetic pigments and powders (such as titanium

dioxide, zinc oxide, mica, and talc). It covalently bonds to the powder surface, forming a durable, lipophilic coating that significantly enhances dispersion, sensory profile, and wash-resistance in color cosmetics and sunscreens.

Packaging

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

Safety and Storage

Hydrolysis Reaction (CRITICAL): Manta L320 reacts with moisture to form cross-linked polysiloxanes while releasing ethanol as a hydrolysis byproduct. Ensure adequate ventilation during application and handling to prevent the accumulation of ethanol vapors.
Storage Conditions: Store in a cool, dry, and well-ventilated area. Keep containers strictly sealed against atmospheric moisture.
Shelf Life: 12 months from the date of manufacture when stored under recommended conditions in original, unopened containers. It's shipped as non-hazardous material.

For Reaction Mechanism, How to Use, and Solvent Selection of Manta L320, please check our blog: https://mantasil.com/blog/

Contact Information

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