MANTA

Technical Data Sheet

Version: 1.0

Manta L1232

Long-Chain Alkyl Functional Silane (C12, Ethoxy-Based)

Description

Manta L1232 is a monomeric long-chain alkylfunctional silane, chemically identified as n-dodecyltriethoxysilane. Featuring a 12-carbon (C12) linear alkyl chain, this product delivers exceptional hydrophobicity, outstanding weatherability, and superior surface modification capabilities.

Distinguished by its ethoxy reactive groups, Manta L1232 offers a more moderate and controlled hydrolysis rate compared to its methoxy counterpart. Upon reaction with moisture, it liberates ethanol, making it a more environmentally friendly and lower-toxicity alternative for stringent formulation requirements.

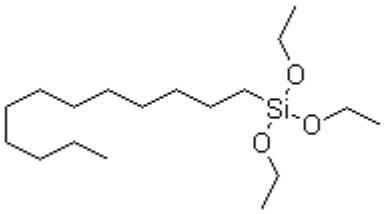
The long molecular structure provides a highly controlled penetration depth. It is widely used in formulating penetrating water repellents for sensitive building materials, cultural heritage conservation, and as a high-performance surface modifier for mineral fillers, pigments, and coatings, retaining the substrate's breathability and original appearance.

Equivalent Grade: Wacker GENIOSIL® DD-Triethoxy

Typical Physical Properties

Manta Code:	L1232
Chemical Name:	n-Dodecyltriethoxysilane
Synonyms:	Dodecyltriethoxysilane; Triethoxy(dodecyl)silane; C12 alkyl triethoxysilane
CAS No. :	18536-91-9
EINECS No. :	242-409-9
Molecular Formula:	C18H40O3Si
Molecular Weight:	332.59
Appearance:	Colorless transparent liquid
Purity (by GC, %):	96.0 min
Density (ρ20°C, g/cm³):	0.885~0.895
Refractive Index (nD 25°C):	1.4220~1.4320
Boiling Point:	152°C (3 mmHg)
Flash Point:	110°C

Chemical Structure:



Applications

1. Architectural Water Repellent & Stone Protection Provides long-lasting, deep water repellency for natural stone, concrete, and masonry.

Key Advantage: Due to its ethoxy-based, low-toxicity profile (liberating ethanol instead of toxic methanol), it is highly recommended for indoor applications or environmentally sensitive green-building projects.

2. Cultural Heritage Conservation The ideal choice for the restoration and preservation of historical monuments, statues, and delicate artifacts. Offers a highly controlled penetration rate and forms a

durable hydrophobic network without blocking capillary pores or altering the original aesthetics of the substrate.
3. Eco-Friendly Surface Modification for Mineral Fillers Significantly improves the hydrophobicity, dispersibility, and resin compatibility of inorganic fillers (such as silica, ATH, MDH, and fiberglass). Especially suitable for compounding processes where formulators demand low-VOC or safer alcohol emissions.
4. High-Performance Additive for Coatings, Adhesives & Sealants Acts as a superior surface modifier and moisture scavenger in eco-friendly formulations, enhancing interfacial adhesion and weatherability.
5. Semi-Permanent Mold Release Agent Effectively utilizes its long non-polar alkyl chain to function as a highly efficient release agent in advanced molding and casting processes.

Packaging

In 20kg pail, 180kg drum and 890kg IBC

Safety and Storage

Hydrolysis Reaction & Ethanol Release: Manta L1232 reacts with atmospheric moisture to form cross-linked polysiloxanes. While the product itself has a high flash point, this hydrolysis reaction liberates ethanol. Ensure adequate ventilation during formulation and indoor applications to prevent the accumulation of ethanol vapors.
Storage Conditions: 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: 24 months from the date of manufacture when stored properly in original, unopened containers. It is classified as a non-hazardous substance for transport.

Contact Information

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