MANTA

Technical Data Sheet

Version: 1.0

Manta LO320

Alkyl Functional Silane (Isooctyl-Based, Low Toxicity)

Description

Manta LO320 is isooctyltriethoxysilane. It is a monomeric, medium-chain alkyl functional silane that serves as a highly effective penetrating water repellent for concrete and cementitious substrates. Distinguished by its ethoxy reactive groups, Manta LO320 offers a significant environmental and safety advantage. Upon reaction with atmospheric moisture or water within the substrate, it hydrolyzes and liberates ethanol rather than toxic methanol. This low-toxicity profile makes it a suitable choice for environmentally sensitive projects, indoor applications, and green-building compliance.

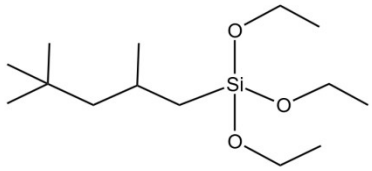
Because of its highly branched eight-carbon structure (isooctyl group), this silane exhibits very low volatility and outstanding steric hindrance against alkali attack. The small molecular size allows Manta LO320 to penetrate deeply into the capillary pores. It chemically bonds with the substrate to form a durable, three-dimensional hydrophobic network, effectively repelling water and waterborne chloride ions while retaining the original appearance and breathability (water vapor permeability).

Equivalent Grade: Wacker SILRES BS 1701.

Typical Physical Properties

Manta Code:	LO320
Chemical Name:	isooctyltriethoxysilane
Synonyms:	Triethoxy(2,4,4-trimethylpentyl)silane
CAS No. :	35435-21-3
EINECS No. :	252-558-1
Molecular Formula:	C14H32O3Si
Molecular Weight:	276.49
Appearance:	Colorless transparent liquid
Purity (by GC, %):	98.0 min
Flash Point:	63°C
Specific Gravity (ρ20°C, g/cm^3):	0.879
Refractive Index (nD 25°C):	1.410

Chemical Structure:



Applications

1. Eco-Friendly Architectural Water Repellent & Protective Agent

Forms a deeply penetrating, durable hydrophobic barrier on concrete, masonry, and stone. Due to its ethanol-releasing nature, it is highly recommended for indoor infrastructure (e.g., parking garages, basements) and green buildings. It effectively prevents water ingress, freeze-thaw damage, and chloride-induced rebar corrosion, significantly extending the service life of the structure.

2. Surface Modifier for Inorganic Fillers

Acts as a highly efficient surface treatment for mineral fillers (such as ATH, silica, and calcium carbonate). The highly branched isooctyl group significantly lowers surface energy, improving the dispersibility and compatibility of fillers in non-polar plastics, rubbers, and resin matrices.

3. Pigment Dispersant & Coating Additive
Enhances the rapid wetting and uniform dispersion of treated pigments (e.g., TiO2) in industrial coatings and masterbatches, reducing viscosity and preventing agglomeration.

Packaging
In 20kg pail, 180kg drum and 800kg IBC

Safety and Storage
Keep in a cool and dry place and avoid storage in direct sunlight. Shelf life is 12 months. Refer to the Safety Data Sheet for hazard classification and safe handling.

Contact Information
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