MANTA

Technical Data Sheet

Version: 1.0

Manta LB320

Alkyl Functional Silane (Isobutyl-Based, Low Toxicity)

Description

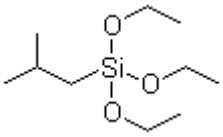
Manta LB320 Silane is an undiluted isobutyltriethoxysilane. Characterized by its small molecular structure and highly stable branched isobutyl group, it allows for exceptional penetration depth into porous cementitious and mineral surfaces.

Distinguished by its ethoxy reactive groups, Manta LB320 offers a significant safety and environmental advantage over methoxy-based silanes. Upon reaction with moisture, it liberates ethanol rather than toxic methanol, making it a safer and more eco-friendly alternative for stringent formulations.

In highly alkaline environments, such as freshly cast concrete, it reacts with moisture to produce silanol groups that chemically bond with the substrate, creating a durable, three-dimensional hydrophobic network. This internal treatment significantly reduces capillary water absorption while retaining the substrate's original appearance and breathability.

Alternative to Dow XIAMETER™ OFS-6403, Wacker GENIOSIL IBTE CE, Evonik Dynasylan® IBTEO and Evonik Catylen® D 1200.

Typical Physical Properties

Manta Code:	LB320
Chemical Name:	iso-Butyltriethoxysilane
Synonyms:	Triethoxyisobutylsilane
CAS No. :	17980-47-1
EINECS No. :	402-810-3
Appearance:	Colorless transparent liquid
Purity (by GC, %):	98.0 min
Density (ρ20°C, g/cm³):	0.8800 ± 0.0050
Refractive Index (nD 25°C):	1.4000 ± 0.0050
Chemical Structure:	

Applications

1. Ziegler-Natta Catalyst Donor (Polyolefin Production) Acts as a highly critical external electron donor in Ziegler-Natta catalyst systems for the polymerization of polypropylene (PP). It provides excellent stereoselectivity control, ensuring high isotacticity and superior mechanical properties in the final polymer.
2. Architectural Water Repellent (Eco-Friendly) Serves as a deeply penetrating sealer for concrete, brick, and natural stone. Due to its ethanol-releasing profile, it is highly recommended for indoor infrastructure and green-building projects to protect against freeze-thaw damage and chloride ion ingress.
3. Mineral Filler Surface Modification Effectively modifies the surface of inorganic pigments and mineral fillers (such as ATH, silica, and talc). The branched isobutyl group lowers surface energy, significantly improving filler dispersion and compatibility within non-polar polymer matrices.

Packaging

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

Safety and Storage

Keep in a cool and dry place and avoid storage in direct sunlight. Shelf life is 12 months. 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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