

# Manta LB310

Alkyl Functional Silane (Isobutyl-Based)

## Description

Manta LB310 is isobutyltrimethoxysilane. Characterized by its small molecular structure and branched isobutyl group, it allows for exceptional penetration depth into porous cementitious and mineral surfaces.

In the presence of moisture and an alkaline or acidic environment, the highly reactive methoxy groups rapidly hydrolyze to produce silanol groups. These silanols chemically bond with the inorganic substrate and crosslink with each other, creating a permanent, three-dimensional polysiloxane network. This internal hydrophobic treatment drastically reduces capillary water absorption while completely retaining the substrate's original appearance and natural water vapor permeability (breathability).

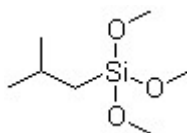
(Note: Highly alkaline environments, such as freshly cast concrete, naturally catalyze the reaction and significantly accelerate the formation of the hydrophobic barrier).

Equivalent Grade: Dow XIAMETER™ OFS-2306 (or DOWSIL™ 2306)

## Typical Physical Properties

Manta code:	LB310
Chemical Name:	iso-Butyltrimethoxysilane
Synonyms:	
CAS No. :	18395-30-7
EINECS No. :	242-272-5
Appearance:	Colorless transparent liquid
Purity (by GC, %)	98.0 min
Specific Gravity (ρ <sub>20°C</sub> , g/cm <sup>3</sup> )	Approx. 0.90
Refractive Index (n <sub>D</sub> 25°C):	Approx. 1.396

Chemical Structure:



## Applications

### 1. Penetrating Architectural Water Repellent

When diluted in appropriate organic solvents, Manta LB310 serves as an elite penetrating sealer for concrete, brick, and natural stone. It deeply impregnates the substrate to protect civil engineering structures and commercial buildings from freeze-thaw damage, chloride ion ingress, and efflorescence.

### 2. Mineral Filler Surface Modification

Acts as a highly effective surface modifier for inorganic pigments and mineral fillers (such as ATH,

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silica, and talc). The branched isobutyl group reduces surface energy, significantly improving filler dispersion, wetting, and compatibility within various organic polymer matrices.

### 3. Sol-Gel & Coatings Intermediate

Utilized as a reactive component in sol-gel processes and as an adhesion-promoting additive in specialized coatings, enhancing both moisture resistance and interfacial bonding.

### Packaging

In 20kg pail, 170kg drum and 850kg IBC

### Safety and Storage

Storage Conditions: Store in a cool, dry, and well-ventilated flame-proof area. Keep containers hermetically sealed at all times to prevent premature moisture cross-linking.

Shelf Life: 12 months from the date of manufacture when stored properly in original, unopened containers.

### Contact Information

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