MANTA

Technical Data Sheet

Version: 1.0

Manta LO320E

80% Isooctyltriethoxysilane Paste / Thixotropic Cream

Description

Manta LO320E is a silane paste containing ~80% active isooctyltriethoxysilane. Designed specifically for the deep waterproofing and protection of reinforced concrete, its thixotropic (paste-like) consistency allows for thick, single-coat applications on vertical and overhead surfaces without sagging or dripping.

This non-sag property ensures extended contact time and very deep penetration into the dense concrete matrix. Manta LO320E provides long-lasting protection for new construction and serves as a highly effective restoration treatment for aging infrastructure. By creating a durable, breathable, hydrophobic barrier, it effectively inhibits the ingress of water and waterborne corrosion factors (such as chloride ions), protecting the internal reinforcing steel and significantly extending the service life of the structures.

Equivalent to Wacker SILRES® BS Creme C, Sika Sikagard®-706 Thixo.

Typical Physical Properties

Manta Code:	LO320E
Chemical Name:	Isooctyltriethoxysilane paste
Active Ingredient Content:	About 80%
Appearance:	White paste
Flash Point:	74°C
Density (25°C):	About 0.90 g/cm^3
Viscosity (20°C):	≥ 5000 mPa·s
Hydrolyzable Chloride Content:	≤ 100ppm
Construction Method:	Brush, roller, high-pressure airless spray
Recommended Dosage:	300 g/m^2
Number of Coats:	1~2 coats
Recoating Interval:	After the previous coat is surface-dry
Tool Cleaning:	Water
Surface Drying Time:	2~3 hours
Complete Curing:	More than 7 days
Suitable Weather For Construction:	Sunny day, wind below level 4, temperature 5~40°C
Unsuitable Weather For Construction:	Rainy and snowy day, strong wind above level 5, freezing weather below 0°C

Properties

- Exceptional Penetration: Small molecular size and extended dwell time allow penetration depths of 3–4 mm into dense concrete.
- High Waterproofing Efficiency: Reduces capillary water absorption of the concrete structure by over 90%.
- Rebar Corrosion Protection: Significantly reduces chloride ion penetration by more than 90%.
- Breathable: Forms a water-vapor-permeable network without forming a surface film; no blistering or peeling.
- Micro-Crack Treatment: Effectively treats micro-cracks below 0.2 mm.
- Aesthetic Retention: Does not darken or alter the original appearance of fair-faced concrete.
- Low Application Loss: Especially suitable for facade and overhead application; minimizes material loss and saves material costs.
- Durability: Excellent alkali resistance and durability, with a protective service life of up to 10–15

years.

Applications

Manta LO320E is highly suitable for the long-term protection of concrete structures exposed to severe environmental stressors, including chloride-induced corrosion (from seawater, salt spray, and de-icing salts) and freeze-thaw damage.
Transportation Infrastructure: Marine and overwater bridges, highway/expressway and railway bridges, piers, urban viaducts, tunnels, and airport runways.
Marine & Water Projects: Seaports, coastal structures, dams, and water treatment infrastructure.
Industrial & Commercial Facilities: Thermal/nuclear power plants, and architectural (fair-faced) concrete buildings.

Application Guidelines

Concrete Age: Allow newly cast concrete to cure for at least 4 weeks (28 days). For newly repaired areas, allow at least 2 weeks of curing.
Surface Preparation: Repair obvious defects (honeycombing, exposed rebar, cracks) using suitable mortar. Thoroughly clean the surface to remove dust, oil, laitance, and efflorescence. Formwork release agents must be completely removed.
Moisture Content: The concrete surface must look visibly dry. Surface moisture content should not exceed 6%.
Construction Method: Apply using high-pressure airless spray (recommended for large areas), brush, or long-hair roller.
Recommended Dosage: Approx. 300 g/m² in 1–2 coats; apply the next coat after the previous coat is surface-dry.
Curing & Protection: Surface drying time is 2-3 hours. Complete curing takes >7 days. Protect the treated surface from rain for at least 24 hours after application.
Weather Conditions: Apply on dry days with temperatures between 5–40°C. Do not apply during rain, snow, freezing weather (< 0°C), or strong winds.
Tool Cleaning: Clean equipment with water immediately after use.

Packaging

In 20L pail, 50L pail.

Safety and Storage

Keep in original tightly sealed containers at 5–45°C. Protect from freezing and direct sunlight. Shelf life is 12 months.

Safety measures

Ethanol Release: Curing reaction releases ethanol. Ensure adequate ventilation when applied in enclosed spaces (e.g., tunnels, basements). Wear safety goggles and protective gloves during application. Avoid contact with plants and protect items that should not be exposed to solvents.
First Aid: Inhalation: Move to fresh air.
Skin: Wash with plenty of soap and water.
Eyes: Flush thoroughly with water for 15 minutes keeping eyelids open; seek medical attention.

Attention

The information listed in this document is based entirely on our knowledge gained in the laboratory and in practice. However, since the use of the product is usually beyond our control, we can only guarantee the quality of the product itself. We reserve the right to modify this product manual without prior notice.

Contact Information

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