

Geo Structural WP Membrane S50

Product Name: GEO STRUCTURAL WP MEMBRANE S50

Type: Cementitious / Polymer, Resin Modified / Fibre-Reinforced Waterproofing Membrane

Form: 2 Component (Powder blends and Liquid blends) mix to form Thixotropic Paste (ready-to-use mortar for application).

Product Description

GEO STRUCTURAL WP MEMBRANE S50 is a premium, interior and exterior waterproofing hydraulic membrane formulated using a proprietary blend of cements, advanced polymers, resin, nano admixtures, and microfilament homopolymer fibre. Enhanced with Nano Engineering Technology, it delivers long-lasting adhesion and waterproofing performance on porous concrete and masonry surfaces. This alkali-resistant, low-odour membrane forms a highly durable barrier that resists hydrostatic pressure and water infiltration while allowing the surface to breathe. Ideal for both above and below-grade applications, it can be overcoated with plaster primer and water-based paints.

Key Benefits

- Nano-enhanced adhesion and penetration for deep sealing.
- Formulated for 100% waterproofing.
- Excellent bonding and tensile strength.
- Excellent crack-bridging and flexibility with fibre reinforcement.
- Withstands hydrostatic pressure from positive and negative sides.
- Durable, alkali, sulphate and efflorescence resistance.
- Low odour and non-toxic – safe for indoor and outdoor use.
- Paintable with plaster primers and water-based decorative coatings.
- Long-lasting decorative finish.
- Can be applied by brush, roller, or trowel.
- Agrément approved – 100% waterproof, block product.

Technical Properties

| Property | Typical Value |
|---------------------------|---|
| Appearance | Grey or off-white thixotropic mortar when blend |
| Density | 1.8 – 2.0 g/cm ³ |
| pH | 10 (alkaline) |
| Bonding strength | 3.75 MPa (with fibre reinforcement) |
| Water Resistance | Excellent (100%) – resists hydrostatic pressure |
| Tensile Adhesion Strength | 5.10 MPa (on prepared concrete) |
| Pot Life | 45 – 60 minutes (mixed product) |
| Application Thickness | 1.5 2.5 mm (in 2 coats) |
| Drying Time (Touch Dry) | 2–4 hours (depending on thickness & temp) |
| Final Curing Time | 24 hours |



Technical Data Sheet

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Initial Issue – 16/05/2014

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Geotech Nano Chemicals (Pty) Ltd

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Applications and Uses

- Retaining walls and basement walls (interior/exterior).
- Concrete bridges and civil structures.
- Masonry and parapet walls.
- Stucco, bricks, concrete blocks.
- Damp-proofing under tile systems.
- Above and Below-grade waterproofing systems.
- Structural support with GEO TEXGRID N10 fibre netting.
- Agricultural silos, sewerage plants, Concrete beams and slabs.

Surface Preparation

- Surfaces must be clean, sound, and free from oil, dust, grease, and loose particles.
- Dampen surface before application but avoid standing water.
- Repair cracks or voids with compatible repair mortar before applying.

Mixing & Application

- Add powder into liquid drum (supplied), mix components thoroughly using a medium-speed drill and agitator.
- Apply with a stiff brush, roller, or trowel in 2 coats (Criss – Cross effect).
- Apply subsequent coats once the previous layer has dried or touch dry \pm 4 hours.
- Do not apply onto frozen or wet substrates.

Coverage

- Approx. 0.75 - 1.0 m²/kg. per 1-coat, need 2 coats (depending on surface texture and porosity).

Packaging

- 40kg kit (e.g., 30 kg powder blends + 10 L liquid blends) – Large kit.
- 20kg kit (e.g., 15 kg powder blends + 5 L liquid blends) – Medium kit.
- Custom packaging on request (5 kg kits for small projects).

Storage and Shelf Life

- Store in cool, dry conditions (5°C – 30°C).
- Shelf life: 12 months in original unopened containers.
- Protect from frost and direct sunlight.

Precautions

- Alkaline in nature – avoid skin and eye contact.
- Use gloves, goggles, and protective clothing.
- In case of contact, rinse with clean water and seek medical advice if needed.
- Not suitable for potable (plastic) water tanks unless sealed with compatible coating.

Disclaimer

The information provided in this TDS is based on laboratory tests and field experience. As application conditions vary, users should perform site trials before full application. Geotech Nano Chemicals assumes no liability for misuse or application outside product guidelines.



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