# HYGROSMART® –BUILDING - 45-THIXO

## One-Component, Fiber Reinforced, High Strength, Thixotropic Cementitious Repair Mortar

### DESCRIPTION

**HYGROSMART®-BUILDING-45-THIXO** is a high technology, one component, fiber reinforced, cementitious repair mortar specially modified to display high strengths combined with easy workability and quick application. Ideal for repairing concrete imperfections, plasters and blockwork. It is also recommended for creation of roof gutters.

**HYGROSMART®-BUILDING-45-THIXO** has very good adhesion, excellent mechanical properties, high thixotropic behavior and may be applied in thick coats of one layer without cracking in horizontal, vertical or overhead applications.

### COMPLIANCE-CERTIFICATION

**CE** certified as **Class R4** repair mortar according to European Standard **EN 1504-03**.

### RECOMMENDED FOR

- Repair mortar on damaged concrete
- Repair of concrete damaged reinforcement steel exposed in acidic environments and/or seawater
- Filling of stiff joints
- Repairs of highway bridge elements
- Roof gutters formation
- Blockwork repairs
- Surface repairs and smoothing in areas of high abrasions

### LIMITATIONS

**HYGROSMART®-BUILDING-45-THIXO** can be applied at temperatures above 5°C and at a maximum temperature of 35 °C.

### FEATURES AND BENEFITS

- Very high bending and compressive strength
- Easy application
- Long pot life
- Excellent adhesion to building materials
- Paintable a few hours after application
- Shrinkage compensated

### APPLICATION

**Substrate Preparation**:

Clean the surface, using jet water if possible. Remove oil, grease and wax contaminants. Cement laitance, loose particles, mould release agents, curing membranes must be removed.

Any exposed reinforcement steel should be cleaned well from rust and treated with special anticorrosive mortar or anticorrosive coating.

### PREPARATION /APPLICATION OF MORTAR

**HYGROSMART®-BUILDING-45-THIXO** (25 Kg) is gradually added under mechanical mixing to 4-4.5 Kg water until desired consistency is achieved. Let the mix still for almost 5 min and stir again.

The substrate is dampened prior to application and the material is applied by trowel in one or more coats. Each successive coat may be applied at a thickness of 20mm. Mix pot life in the pail is almost 60 min. As soon as the hardening process begins, the material may be sanded in order to enhance the bonding of the second coat (sanding can be done with a chock of EPS, sponge or trowel depending on the final surface we need to achieve).

When the product is applied under high temperatures or dry wind, we keep it wet by sprinkling with water.

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The applied product should be protected from rain or frost for at least 10 hours.
Application temperature should be between 5°C and 35°C.

## CONSUMPTION

17.5 kg/m²/cm thickness.

## PACKAGING

25 kg Bags. **Color:** Grey

## CLEANING

Clean brushes and tools with plenty of water after use. Hardened material can only be removed by mechanical means.

## SHELF LIFE

Can be kept for 12 months minimum in the original unopened bags in dry places and at temperatures of 5-25°C.

## SAFETY INFORMATION

Contains cement: May cause skin irritation due to alkaline reaction. Use protective gloves and goggles. The MSDS (Material Safety Data Sheet) is available on request.

## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| CE | |
| 18 | |
| **ALCHIMICA S.A.**<br>7 Lampsakou, Athens - GREECE | |
| 2085-CPR-061/05.03.2020 | |
| EN 1504-03:2005<br>2085<br>HYGROSMART- BUILDING-45-THIXO<br>Concrete repair product for structural repair (CC) mortar<br>R4, class III | |
| www.alchimica.com | |
| Capillary absorption | 0.05 kg/m².h$^{0,5}$ |
| Compressive strength | 49.6 N/mm² |
| Chloride ion content | <0.01% |
| Adhesive bond | 2.9 N/mm² |
| Thermal compatibility | 2.4 N/mm² |
| Carbonation resistance | pass |

Certified quality, environmental and occupational health & safety management systems:
ISO 9001/14001 & ISO 45001.

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| PROPERTY | RESULT |
|---|---|
| Color | grey |
| Water requirement | 16-18% |
| Maximum grain size (mm): | 2,0 |
| Density of dry mix (kg/lt) | 1,8±0,2 |
| Density of wet mix (kg/lt) | 2,2±0,2 |
| Water-soluble chlorides content | <0.05 % |
| Adhesion strength | >1.5 MPa |
| Pot life in the pail (at 20ºC) | ≥1h |

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