MasterCrete™ 285 Thix

(Albaria® Struttura 285 Thix)

Puzolanic Lime Based, Repair Mortar Designed for Historical Masonry Buildings

Material Description

MasterCrete™ 285 Thix is a high-strength, thixotropic repair mortar based on pozzolanic lime and natural graded aggregates, developed specifically for the restoration of historical masonry structures. It is a factory-produced masonry mortar that is completely cement-free and designed to provide excellent workability, adhesion, and full compatibility with traditional materials.

Areas of Application

- Repair and strengthening of masonry walls
- Repair and strengthening of arches and vaults
- Repair of wall and plaster surfaces
- Embedding of carbon rods into masonry joints
- Repair and strengthening of masonry foundations
- As a repair mortar for floor repairs or thick-layer applications when mixed with aggregate

Features and Benefits

- Cement-free composition
- High mechanical strength
- Excellent adhesion to substrate
- Low content of water-soluble salts
- Easy to prepare and apply
- Breathable; high water vapor permeability
- Low capillary water absorption
- High resistance to efflorescence

Processing Method

(A) Surface Preperation

The repair or plastering surfaces of historical masonry structures must be solid, dust-free, and clean. Remove all materials that may weaken adhesion such as oil, grease, or rust. Before applying MasterCrete™ 285 Thix, moisten the surface to improve bonding and setting. If active water leakage exists, it should be stopped with a suitable plugging mortar and properly drained. No free water should remain on the surface before application.

(B) Mixing

Pour the required amount of clean water into a mixing container. Gradually add MasterCrete™ 285 Thix while mixing for about 4 minutes using a mechanical

Technical Properties		
Structure of the Material	Pozzolanic lime and specially graded natural aggregates	
Water Vapour Permeability EN 1745	μ<35	**WK**
Water-Borne Salts UNI 11087	Electrical Conductivity <80μS.CM^{-1} SO_4 <%1 Na^+ <%0,05 K^+ <%0,05	
Capillary Water Absorption UNI EN 1015/18	0,2 kg.m^{-2}.min-0,5	
Compressive Strength UNI EN 1015/11	15-20 N/mm^2	
Modulus of Elasticity UNI EN 13412	16,000 N/mm^2	
Application Temperature	+5^{0}C + 40^{0}C	

Typical values are obtained from the test results of 4x4x16 mortar prism in 23°C and 50% relative humidity conditions. High temperatures shortens the curing and working time, lower temperatures extends the durations.

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mixer at 400–600 rpm until a homogeneous and lump-free mixture is obtained. Let the mixture rest for about 4 minutes, then remix for 30 seconds before use.

Mixing Ratio

MasterCrete™ 285 Thix	1 kg Powder	20 kg Bag
Water Quantity	0,15-0,17 liter	3,0-3,4 liter
Mixed Density	2,07-2,10 kg/liter	

(C) Processing

Apply the prepared mortar with a trowel at a thickness between 1–5 cm. After the mortar has lost its surface water, lightly sprinkle with water and finish with a steel or wooden trowel. For multi-layer applications, apply each layer only after the previous one has hardened. Each layer should not exceed 5 cm in thickness, and the previous layer should be moistened before applying the next one. For thick applications or screed-type repairs, add 30–35% by weight of clean, washed aggregate (5–20 mm). Depending on the desired consistency, the amount of water may be increased by 10–15%. On large exposed surfaces, especially in hot, dry, or windy conditions, protect the surface for 24–48 hours after application using wet burlap or gentle water curing to prevent rapid evaporation.

Consumption

Approximately **17.0 kg/m²** of dry product is required for a **1 cm** thick layer.

Points to Consider

- Do not apply when ambient or substrate temperature is below **+5 °C** or above **+40 °C**.
- During curing, the temperature of the environment and substrate must not fall below the permitted minimum.
- Protect outdoor applications for **24–48 hours** after application from direct sunlight, wind, rain, and frost.

Cleaning of Tools

Clean tools and equipment with water immediately after use. Once hardened, MasterCrete™ 285 Thix can only be removed mechanically.

Packaging

20 kg polyethylene-reinforced kraft bag.

Shelf Life

12 months from the production date under appropriate storage conditions. Opened package should be tightly sealed and used within one week.

Storage

Store unopened bags in a cool, dry place, protected from frost. For short-term storage, stack a maximum of **3 pallets** and follow the **first in–first out (FIFO)** principle. For long-term storage, do not stack pallets.

Health and Safety

Standard precautions for handling chemical products should be followed. Wash hands thoroughly during breaks and after work. Do not eat, drink, or smoke during application. Refer to the **Material Safety Data Sheet (MSDS)** for detailed safety and handling information. Product and packaging disposal must comply with local regulations; responsibility lies with the end user.

Disclaimer

The information in this technical document is based on current scientific and practical knowledge. **MBT Teknik Yapı Kimyasalları**

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Contact

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