

MasterCrete® N 900

Reprofiling Mortar for Concrete Structures

Material Description

MasterCrete® N 900 is cement based one part, polymer and fibre modified repair mortar for finishing the concrete surfaces.

Complies with EN 1504-3/R2

Areas of Application

- Repair and finishing the concrete surfaces,
- Providing sound and waterproof layer on concrete surfaces under epoxy and PU coatings in industrial plants.
- Providing sound layer on concrete surfaces under waterproofing systems.
- Repair of the defects on the concrete surfaces before coating (tile etc.) applications,
- Providing smooth and waterproof layer under paintings,
- Providing smooth layers over structural repair mortars.

Characteristics and Benefits

- Mixed with only water and can be applied easily
- Perfect bonding to the concrete substrates

- Can be applied in wide areas without cracking
- Thixotropic and can be used in over-head applications
- Waterproof
- Resistant to freeze-thaw cycle
- Shrinkage compensated

Processing Method

(A) Preparation of Substrate

The concrete surfaces must be sound, clean and dry. It shouldn't be weakened by over-troweling and lack of curing. The concrete should be free of frost, curing membranes, waterproofing treatments, oil stains, laitance, friable material and dust. If there is a water leakage it must be drained or properly plugged. Defects up to 4 cm depth should be repaired with MasterCrete® S88 C before starting to MasterCrete® N 900, applications. Concrete surfaces must be saturated with water before application.

(B) Mixing

Add enough water into a clean mixing bucket by using a proper water gauge. Add the powder into the bucket slowly and continuously. Mix the fresh mortar with a proper electrical

Technical Properties	
Structure of the Material	Mineral Fillers and Polymer Modified Cement
Color	Grey
Compressive Strength TS EN 196	
	(1 day) > 15 N/mm ²
	(7 days) > 30 N/mm ²
	(28 days) > 40 N/mm ²
Flexural Strength (TS EN 196) (28 days)	> 7,0 N/mm ²
Bonding Strength to concrete (TS EN 1542) (28 days)	> 1,0 N/mm ²
Application Thickness	Min. 1 mm Max. 5 mm
Application Temperature	+ 5°C + 30°C
Pot Life (20°C)	45 minutes
Fully Cured (20°C)	28 days

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 (300-600 rpm) for 4 minutes until having a homogenous consistency. Let the mortar have rest for 4 minutes and re-mix for 30 seconds.

Mixing Ratio

MasterCrete® N 900	Amount of Mixture Water	Density of Mixture
For 1 kg Powder	0,19 liter	~2,05 kg/liter
For 25 kg Bag	4,75 liter	

(C) Processing

MasterCrete® N 900 should be applied to the prepared surface by using a steel trowel. Application thickness should be between 1-5 mm. After the mortar finishes its first setting, some water should be sprayed onto the mortar and the surface should be finished with using steel or wooden trowel. Open areas should be protected from the rain, wind, etc. Aggressive whether conditions during the first 24-48 hours after finishing repair by using wet clothes, curing membranes etc.

Consumption

1.72 kg/m² for obtaining 1 mm thick layer.

Point to Consider

- Mixed mortar must be used in 45 minutes in 20°C. Working time will be 20-25 minutes in 30°C.
- Open areas should be protected from the rain, wind, etc. Aggressive whether conditions during the first 24 hours after finishing repair.
- Cement based materials' pot life and curing times vary depending on the relative humidity, substrate and ambient temperature.
- Reaction gets slow in low temperatures and it causes to extension on pot life and working time. On the other hand high temperatures speed up the reaction, which results to short pot life and working time. For full curing of material,

both the substrate and ambient temperature shouldn't be under allowed application temperature.

Cleaning of Tools

All the tools and equipments must be cleaned by water after the application. After MasterCrete® N 900 is hardened, it can only be removed from the surface mechanically.

Packaging

MasterCrete® N 900 is available in 25 kg polyethylene reinforced kraft bag.

Shelf Life

12 months after the production date under appropriate storing conditions. Opened packages have to be stored by tightly sealing the bag/cover and must be used in one week.

Storage

Must be stored in unopened original packing, and in cool and dry environment protected from freezing. In short-term storing, maximum 3 palettes can be stowed on top of each other and delivery has to be according to first in first out system. In long-term storing, the palettes must not be stowed on top of each other.

Health and Safety

It is dangerous to approach the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply with the Occupational Health and Safety Rules should be used. Due to the irritation effect of the uncured materials, the mixture should not come into contact with skin and eyes; in case of a contact, the affected area should be washed with plenty of water and soap; in case of swallowing, a physician should be consulted immediately. No food or beverages should be brought to the application area. The product should be stored and kept out of reach of children. For detailed information please consult the Material Safety Data Sheet.

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Disclaimer

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MasterCrete® N 900	
TS EN 1504-3:2005 Yapısal olmayan tamir - R2 (Non-Structural Repair Mortar)	
3.1 Elle harç uygulaması / Concrete restoration by applying mortar by hand	
Basınç Dayanımı (Compressive Strength)	≥ 15 N/mm ²
Klorür İçeriği (Chloride Ion Content)	≤ % 0.05
Adezyon Dayanımı (Adhesive Bond)	≥ 0,8 N/mm ²
Kontrollü Büzülme / Genleşme (Restrained Shrinkage/Expansion)	≥ 0,8 N/mm ²
Yangına Tepki (Reaction to fire)	A1
Tehlikeli maddeler (Dangerous substances)	Madde 5.4'e uygun (Comply with clause 5.4)

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