



The Chemical Company

EMACO® 90

EMACO® R 690

Reprofiling Mortar for Concrete Surfaces

Description of Product

EMACO® 90 is cement based one component, polymer and fibre modified repair mortar for finishing the concrete surfaces.

Ministry of Public Works Pos. No: 04.613/3-a

Fields 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.

Features 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.

Technical Data

Product Chemistry	Mineral fillers and polymer modified cement	
Colour	Grey - White	MK
Compressive Strength (20°C) TS EN 196		
1 day	>20 N/mm ²	
7 days	>35 N/mm ²	
28 days	>40 N/mm ²	
Flexural Strength (20°C) (28 days) TS EN 196	>7 N/mm ²	
Bonding Strength (to concrete) (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 at 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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Application Procedure

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 **Emaco® S88 C** or **Emaco® S88** before starting to **EMACO® 90** applications. Concrete surfaces must be saturated with water before application.

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 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 Ratios

EMACO® 90	1 kg powder	25 kg bag
Water Quantity	0,19 liter	4,75 liter
Mixed Density	2,05 kg/liters	

Application Method

EMACO® 90 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.

Coverage

1.72 kg/m² for obtaining 1mm thick layer.

Watchpoints

- Mixed mortar must be used in 45 minutes in 20°C. Working time will be 20 - 25 minutes in 30°C.
- Cement based materials' pot life and curing times vary depending on the relative humidity, substrate and environment 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 environment temperature shouldn't be under allowed application temperature.
- Open areas should be protected from the rain, wind, etc. aggressive whether conditions during the first 24 - 48 hours after finishing repair.

Cleaning of Tools

After the application all tools should be cleaned with water. **EMACO® 90** can be cleaned with only mechanical abrasion after hardening.

Packaging

25 kg bag.

Storage

Store in original container in cool (+5°C - +25°C) and dry indoor conditions.

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Shelf Life

12 months under proper storage conditions after production date.

Health and Safety Precautions

It is dangerous to get close to the store areas with fire. The store must be well ventilated. Work clothes, protective gloves, glasses and mask defined in Labour Laws must be used during the application. Avoid from material to contact with skin and eyes. In case of contacting wash your skin with water and go to doctor immediately

Don't bring any food and drink to the application area. Store the material away from the children. For further information Material Safety Data Sheets should be read.

Disclaimer

This information and all further technical advice are based on our present knowledge and experience. BASF Yapı Kimyasalları San. A.S. is only responsible for product's quality. The results, caused by wrong application and/or application methods and fields exception of technical advices on the application of the product in this technical data sheet, implies no liability or any other legal responsibility on BASF Yapı Kimyasalları San. A.S.

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