

ACS MORTAR RM 40[®]

Cement Based, Structural Repair Mortar



■ Description

ACS MORTAR RM 40[®] is a cement based one-component polymer modified fibre reinforced and high strength structural repair mortar. (In compliance with EN 1504-3 / R4 and Formal Code No : 04.613/3b)

■ Place of usage

- Repair of reinforced concrete building elements and repair of segregation.
- Repair of the tie-rod, test and cone holes.
- Protection of the concrete against sulphate and chloride attacks.
- Repair of the marine structures.
- Repair of the underground structures.
- Structural and non-structural repairs of high strength concrete elements.

- Gross concrete is waterproof and has a solid layer.
- With traffic load and coating in surface repairs of future floors.

■ Consumption

1.90 kg/m² for obtaining 1 mm thick layer

■ Advantages

- Perfect bonding to the concrete and steel.
- Mixed with only water and can be applied easily.
- Resistant to freeze-thaw cycle.
- Thixotropic.
- Waterproof.
- Resistant to oils.
- Resistant to sulphate and chloride attacks.
- High compressive strength.
- No shrinking.

TECHNICAL CHARACTERISTICS

Composition		It contains mineral fillings, fibers and special cement with polymer reinforcement.	
Color		Grey	
* Pressure Strength (TS EN 196)	1 Days	> 20 N/mm ²	
	7 Days	> 40 N/mm ²	
	128 Days	> 60 N/mm ²	
* Flexural Strength (28 days) (TS EN 196)		> 7,0 N/mm ²	
Adhesion Strength (To Concrete) (28 days)		> 2,0 N/mm ²	
* Elasticity Module (28 days)		> 20.000 N/mm ²	
Capillary Water Absorption (TS EN 13057)		≤ 0,5 kgm ⁻² . Hour ^{-0,5}	
Application Thickness		Min. 10 mm Maks. 40 mm	
Use Time (+20°C)		35 Minutes	
Time to Walk on it (+20°C)		24 Hours	
Fully Cured Time (+20°C)		28 Days	
The Temperature of The Ground		+5 °C +35 °C	
Service Temperature		-20 °C + 420 °C	

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***Typical values have been obtained as a result of experiments done at +23°C, 50% relative humidity, 4x4x16 cm mortar prism. The values may change due to the difference in site ambient. High temperatures shorten and low temperatures extend the process.*

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APPLICATION PROCEDURE / SURFACE PREPARATION

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. The perimeters of repairs to concrete that involve concrete removal and subsequent materials replacement shall be saw cut perpendicular to the repair surface, corroded reinforcements should be cleaned and if needed replaced with new ones. The surfaces should be wetted before application. If there is a water leakage it must be drained or properly plugged.

MIXING

Add enough water into a clean mixing bucket by using a proper water gauge. **ACS MORTAR RM 40®**, 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

ACS MORTAR RM 40®	1 kg powder	25 kg bag
Mixture Water Amount	Maks. 0,16 liter	Maks. 4 liter
Mixture Density	2,23 kg/liter	

APPLICATION METHOD

ACS MORTAR RM 40®, should be applied to the prepared surface by using a steel trowel. Application thickness should be between 1-4 cm. For thicker applications second layer of the mortar should be applied after 24 hours in same way. 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.

Tips to notice

- Repair mortar should be applied in 30 minutes in 20°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. Besides 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.
- Do not use **ACS MORTAR RM 40®** in case of contacting to liquids with a PH under 5.5.
- Do not use as a screed or concrete topping in wide areas.

CLEANING OF TOOLS

After the application all tools should be cleaned with water. **ACS MORTAR RM 40®** can be cleaned with only mechanical abrasion after hardening.

PACKAGING

25 kg bag

STORAGE

In unopened original package, it should be stored in a cool and dry environment at + 10 °C + 25 °C temperature protected. 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.

SHELF LIFE

The shelf life is 12 months from the date of production under suitable storage conditions. Opened packages should be closed firmly and consumed within 1 week.

SAFETY

During the application, work clothes, protective gloves, goggles and masks should be used in accordance with the Occupational Health and Safety Rules. Due to the irritating effects of uncured materials, the components should not be allowed to come into contact with the skin and the eye. In case of contact, immediately wash with plenty of water and soap. If swallowed, seek medical advice immediately. Food and beverages should not be left at the application areas. Keep out of reach of children.

□ Responsibility

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. **ACS A PLUS CONSTRUCTION SOLUTION YAPI ANONİM ŞİRKETİ** is only responsible for the quality of the product. **ACS A PLUS CONSTRUCTION SOLUTION YAPI ANONİM ŞİRKETİ** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones (06/2019)