

ECMAREP 507

Pourable Rheoplastic, Anti-shrinkage Microconcrete with Corrosion Inhibitor

Description

ECMA REP 507 is supplied as a ready to use blend of dry powders which requires only the site addition of clean water to produce a free-flowing non-shrink repair micro concrete which including corrosion inhibitor. The material is based on Portland cements, graded aggregates and fillers, and additives which impart controlled expansion characteristics in the plastic state, while minimizing water demand. The low water requirement ensures high early strength and long-term durability. For larger repairs, the mixed ECMA REP 507 may be modified by the addition of 5mm to 12mm clean, graded, saturated surface dry aggregates at site.

Areas of Application

For all the casting or formwork concrete applications where high structural values and resistance against ambient or chemical aggression are required (ex. repair of motorway slabs, reinforcements of concrete pipes, reinforcement or repair of dosserets, reinforcement of piles through canning, special beams for structural reinforcement, foundation works with very high resistances etc..)

Advantages

- No bleeding or segregation.
- Very high adhesion to the substrate and re-inforcement steel
- Controlled expansion to compensate the hygrometric shrinkage
- Exceptional mechanical resistance
- Resistant to frost / thaw cycling and to the penetration of oil and grease.
- Inhibited corrosion reactions of the re-inforcement steel due to presence of MCI

Technical Specification

The following results were obtained at a Water/Powder ratio of 0.16 @ 30°C.

Appearance	Grey
Physical State	Free Flow Powder
Compressive Strength (N/mm ²) as per IS 4031 Part - 6	
1 Day	>20
3 Day's	>35
7 Day's	>50
28 Day's	>65
Fresh Wet Density Kg/m ³	2250±100
ECMAREP 507 Required for 1 m ³ Volume Kg	1900 - 2100
Unrestrained expansion as per ASTM C 827	1.0 - 2.0 %
Tensile Strength at 28 days	>2.0 (N/mm ²)
Flexural Strength at 28 days	>7.0 (N/mm ²)



Application Instruction

Surface Preparation: The substrate surface must be free from oil, grease or any loosely adherent material. The surface must be scabbled or sandblasted to remove all weak cement laitance. Surface laitance and unsound concrete must be chipped away so that a reasonable rough, but strong sound surface is provided.

Mixing: Allow to mechanically powered grout mixer or drum mixture should be used with a slow speed drill (250-400 rpm) fitted with a paddle is suitable. Larger quantities will require a heavy duty mixer. Mix 4- 5 Minutes until homogeneous flowable mix is obtained and make sure that no unmixed powder is left at the bottom of the mixture.

Placing: place the grout within 15 - 20 minutes of mixing to gain full benefit of the expansion process. ECMAREP 507 can be placed in thicknesses up to 100 mm in a single pour when used as an under plate grout.

Curing: After completion of the grouting operation, exposed areas should be thoroughly cured. This should be done by the use of ECMA Cure curing Compound, continuous application of water.

Performance Specification:

The micro concrete in the flow able consistency should achieve a compressive strength of not less than 65 N/mm² after 28 days at 30°C. Most importantly, the cured micro concrete shall contain no metallic aggregates, or chlorides and shall be shrinkage compensated in the plastic state. The unrestrained expansion shall be between 1 - 4%. The flexural strength shall not be less than 5 N/mm² @ 28 days. The microconcrete shall have a coefficient of thermal expansion similar to that of the host concrete. The mixed density of micro concrete shall exceed 2100 kg/m³ at 27°C.

Packaging

25 Kg HDPE Bags.

Shelf Life

06 Months in original unopened sealed condition.

Storage & Handling

Material should be stored in Cool and Dry shade. Please do not use hook and handle carefully during transport.

Safety Precautions

Wear all PPE's at the of Application like Safety boot, Safety Goggle, Hand Gloves, Mask and avoided with contact of Skin and Eyes. Any direct skin contamination with the hardeners should be washed off immediately with soap and water.

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