ECMA BORPAC

ECMA BORPAC

Single Part, Non-shrink, free flow, Cementitious, horizontal bore packing mortar

Description

ECMABORPAC 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 cement mortar. 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.

Areas of Application

ECMABORPAC is used for repairs to damaged reinforced concrete elements, particularly where access is restricted and where vibration of the placed material is difficult or impossible. It is suitable for various bore packing with annular space holes where permanent waterproofing is required.

Advantages

- Gaseous expansion system compensates for shrinkage and settlement in the plastic state.
- Can be pumped or poured into restricted locations.
- Highly fluid to allow for placement without vibration.
- Pre-packed to overcome site-batched variations.
- Rapid strength gain to facilitate early reinstatement.
- High ultimate strengths and low permeability of cured repair.
- Contains no chloride admixture.

Technical Specification

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

Appearance	Grey
Physical State	Free Flow Powder
Compressive Strength (N/mm²) as per IS 4031 Part - 6	
1 Day	>15
3 Day's	>30
7 Day's	>45
28 Day's	>60
Fresh Wet Density Kg/m^3	2300±100
ECMA BORPAC Required for 1 m^3 Volume Kg	1900 - 2100
Unrestrained expansion as per ASTM C 827	0.5 – 2.0 %
Tensile Strength at 28 days	2.0 (N/mm²)
Flexural Strength at 28 days	5.0 (N/mm²)
Slant shear bond strength ASTM C 882	>9N/mm²
Co-efficient of thermal expansion	11-12x10^{-6} ºC
Elasticity of Modulus (ASTM 469 - 94)	27 K N/mm²
Resistance to water penetration (DIN1048: Part 5)	No penetration @ 0.2Kgf/cm² for 6 hours

ECMAS
www.ecmas.in

ECMA BORPAC

Application Instruction

Surface Preparation: The substrate surface must be free from oil, grease or any loosely adherent material. The surface must be scrabbled 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.

Type of Mix	Water Powder Ratio	Water Required For 25 Kg Bag
Plastic	0.14	3.50 Ltr
Pourable	0.16	4.00 Ltr
Flowable	0.17	4.25 Ltr

Placing: place the grout within 15 - 20 minutes of mixing to gain full benefit of the expansion process. ECMA BORPAC 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.

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.

ECMAS CONSTRUCTION CHEMICALS PVT. LTD
7-4-124 Gaganpahad,
International Airport Road
Hyderabad, India - 500 052
Phone: +91-40-24360014, 16, 17-Email: ecmas@ecmas.co.in

ECMAS
www.ecmas.in