

Cicorepair® Fill

Fiber Modified Filling Cementitious Mortar

DESCRIPTION

Cicorepair® Fill is a fiber and polymer modified cementitious filling and repair mortar that has been designed to provide excellent shrinkage control and flexural strength. It also prevents crack propagation. Cicorepair® Fill is designed to fill deep cavities and holes especially when waterproofing is desired. It obtains low permeability and good abrasion resistance as well. Cicorepair® Fill is applied by gloved hands in general, or by other plastering tools depending on its cohesive consistency which allows using it as a filling mortar for deep holes like tie rods tubes.

USES

- Filling deep cavities and holes like reinforced concrete sharp roughness and tie rod holes.
- Reinstating column edges.
- Exterior and interior repair.
- New and old structures repair.

ADVANTAGES

- Controllable mortar consistency.
- Non-shrink mortar
- Doesn't need a bonding agent for deep holes.
- High compressive and flexural strength.
- Non-calcareous material (it does not contain free lime or separate calcium carbonate).
- Non-toxic, can be used for potable water structures.
- Obtains high durability for structures.
- Minimizes carbonation and chloride attack on steel reinforcement.
- Economic & easy to apply, just add water.
- High bonding strength with most construction substrates, including PVC tubes.
- Minimizes chemical attack over concrete.
- Good resistance to chemicals.

PACKAGING

25 kg bags

SHELF LIFE & STORAGE

12 months storage life if stored in its original unopened containers under a dry and shaded place in a temperature from 2°C to 55°C.

TECHNICAL PROPERTIES

Form	Grey Powder
Wet Density @ 25°C	2140±30 kg/m³
Pot Life @ 25°C	
Initial setting time @ 25°C	3 hrs.±10 min.
Final setting time @ 25°C	7 hrs.±10 min.
Yield (25 kg bag)	14 liters

MECHANICAL CHARACTERISTICS

Compressive Strength (BS 6319)	
1 day	27±1 N/mm²
3 days	39±1 N/mm²
28 days	56±1 N/mm²
Flexural Strength @ 17% W/P (ASTM C348) @28 days	11±0.25 N/mm²
Tensile Strength @ 17% W/P @28 days	6.5±0.25 N/mm²
Shear bond to concrete @ 17% W/P (BS 6319) @28 days	24±2 N/mm²

APPLICATION INSTRUCTIONS

Surface Preparation

All Concrete Substrates should be sound, clean, and free from oil, grease, and all curing or release agents. Any loose or weak concrete should be removed using hand tools or light mechanical tools (heavy tools are not recommended), and all steel reinforcement should be reached to the extent to be coated from all around by hand, then cleaned either by sandblasting if possible or by using hard steel brush. Just after cleaning, the steel reinforcement should be coated by protective material (Cicorust®EP or Cicoprime®Zincrich). All concrete surfaces should be wetted by water reaching SSD condition (Saturated Surface Dry) prior to applying the bonding layer or the repair mortar directly.

Bonding Layer:

For deep holes like tie rod tubes or sharp concrete cavities (which exceed 10 mm in depth), the use of a bonding layer is not needed. In case a bonding layer is required, brush a slurry consisting of a mix of either Cicobond®ACR or Cicobond®SBR with cement as a bonding agent on the wet concrete surface (please review the TDS of the chosen product before use).

Mixing

Use a clean suitable container (not less than 20 liters volume) for one bag mixing using a high torque medium speed mixer and suitable pedal for about 90 seconds. (Mixing more than one bag at once is not recommended) Always add the powder to clean water. The advisable quantity of water is 4.25–4.50 liter/bag. It is recommended to keep the mixed mortar temperature in the range of 10–30°C and shading all the time while storing, mixing, and placing.

Application

Apply Cicorepair®Fill by gloved hand or steel trowel directly inside the clean hole or over the live bonding agent.

Curing

For exposed surfaces, and just after finishing Cicorepair®Fill surface (within 45 minutes after applying), it's highly recommended to spray the same used bonding agent after diluting with an equal volume of water as a curing compound, otherwise, any of Cicocure® products can be sprayed.

LIMITATION

The minimum layer thickness or hole diameter of using Cicorepair®Fill is 10 mm, and it can be used for filling holes up to 150 mm in one go application, but for concrete flat surfaces, it is not recommended to be applied for more than 20 mm thickness layers.

CLEANING

Tools contaminated with Cicorepair®Fill may be cleaned using clean water. Hardened material can only be removed by hand tools or light mechanical means.

For more details, please review our Technical Guide for Cementitious Repair

PRECAUTIONS

Health And Safety

Cicorepair®Fill is an alkaline, non-hazardous. It should not be swallowed or allowed to come into contact with skin or eyes. Suitable protective goggles and gloves should be worn. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. When contact with the skin is made, wash off immediately with soap and water. If swallowed, seek medical attention immediately, do not induce vomiting.

TECHNICAL SUPPORT

CIC provides on-site assistance and consulting services on projects when requested. Technical data sheets on other CIC products and guidance on their use are available on request.

Warranty

CIC products are guaranteed against defective materials and manufacture and sold subject to CIC's standard terms and conditions of sale. Whilst CIC endeavors to ensure that any advice, information or recommendation given is correct, the company cannot accept any liability either directly or indirectly arising from the use of its products. User of the product must test the product's suitability for the intended application and purpose, since the company has no control over the application of its products. Information contained in this document is given on the best current knowledge. Our Products are in continuous development and CIC reserves the right to change the product without prior notice.

