

### HIGH STRENGTH MORTAR FOR TIEHOLE FILLER

#### Description

REPCON TI is a single component, polymer modified, fiber reinforced, rapid curing cement based repair mortar to fill Tiehole

REPCON TI is supplied in powder form, ready to use with the addition of water to provide a durable, rapid setting, high strength and easy to apply mortar with excellent low sag properties.

#### Uses

For the filling of tie-holes formed by formwork bolts in new construction, particularly where a rapid setting, durable, waterproof mortar is required. Can also be used for sealing grout holes and voids around fixings in pre-cast elements.

#### Advantages

- Easy to apply. Single component, requires only addition of water.
- High bond strength, Durable, ensuring monolithic performance of the repair.
- Fast set.
- Waterproof seal which withstands upto 5 bar water pressure after only 72 hours curing.
- Low permeability to water, providing excellent protection to steel reinforcements and host concrete.
- Excellent low sag properties.
- Chloride free.
- Enhanced tensile and impact strength.
- Cost effective, usually no special priming or preparation is required.

#### Technical Data

The following typical results were obtained at W/P-018

Fresh density	2.20 kg/m <sup>3</sup>
Working time	Approx 30 mint
Water powder ratio	0.17 to 0.18
Compressive strength(ASTM C109)	
1 day	Approx 10N/mm <sup>2</sup>
28 days	Approx 30N/mm <sup>2</sup>
Flexural strength(BS 6319-3)	Approx 6N/mm <sup>2</sup>
Final setting	Approx 90 mint

#### Application Methodology

##### Substrate Preparation

All surfaces must be clean and free from dust, oil, grease, paints, or any loose material. Needle gunning or bush hammering should be done to provide clean substrates. The strength of the concrete sub-base should be a minimum of 20 N/mm<sup>2</sup>.

##### Priming

Areas/holes to be repaired with REPCON TI should be soaked with clean water before applying the repair mortar. All excess water should be removed prior to applying REPCON TI.

##### Mixing

To ensure proper mixing, a mechanically powered mixer or drill fitted with a suitable paddle should be used. Only mix sufficient material as can be used within the working life of the material.

4.25 to 4.5 litre of clean water should be added to a clean container, the 25 kg powder is then added slowly to the water while mixing continuously with low speed mixer/drill (400 - 600 rpm). Mixing time should be continued for 3 minutes until a uniform consistency is obtained.

##### Placing and finishing

For normal applications, **REPCON TI** should be compacted, using a placing technique to remove entrapped air, in layers not exceeding 75mm deep. For repairs which require multi-layer applications it is important to ensure that the previous layers are well keyed and stable but not fully set (usually 30-45 minutes dependent upon temperature) prior to the application of subsequent layers.

The mixed mortar can be filled with an adhesive gun(the nozzle is attached to a 200 mm long pipe of dia 18 mm) and can be applied through the hole by covering the other end of the hole.

##### CURING

As REPCON TI is a cementitious based material, it should be cured in a similar method to concrete. It is important that the surface of the mortar is protected from strong sunlight and drying winds. Curing can be conducted by using appropriate curing methods or polythene sheeting.

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#### Packing

5 kg and 25 kg bag

#### Limitations

REPCON TI can be applied in a single application for sections up to 75 mm thickness. The thickness should not be less than 5 mm deep in all applications.

#### Storage and Shelf Life

REPCON TI has a shelf life of 12 months if kept in a dry environment, in its original packing. If stored in conditions of high temperature and/or humidity, the shelf life may be reduced.

#### Cleaning

All tools should be cleaned immediately after application using fresh water. Hardened materials must be cleaned mechanically.

#### Fire

REPCON TI, is non-flammable and thus presents no fire hazard.

For further information, please refer to the Product Material Safety Data Sheet for REPCON TI.

#### Safety precautions

REPCON TI contains cement powders which, when mixed with water or upon becoming damp, release alkalis which can be harmful to the skin. During use, avoid inhalation of the dust and contact with the skin or eyes. Wear suitable protective clothing - eye protection, gloves and respiratory equipment (particularly in confined spaces). The use of barrier creams to provide additional skin protection is also advised. In case of contact with the skin, rinse with plenty of clean water, then cleanse thoroughly with soap and water. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting.

#### Note

All Technical Data Sheets of FIRSTCHOICE SPECIALITY CHEMICALS are updated on regular basis; it is the user's responsibility, to obtain the most recent issue. Field services where provided, does not constitute supervisory responsibility, for additional information contact our local representative.

#### Disclaimer

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