

## MASTEROCK BASIC

SINGLE COMPONENT, NON-SHRINK CEMENTITIOUS FREE FLOWING MICROCONCRETE

### DESCRIPTION

**MASTEROCK BASIC** is a ready to use cement aggregate/sand mix requiring only addition of water to produce a free-flowing repair concrete. It consists of blend of Portland cement, graded aggregates and fillers, water reducing agents and auxiliary expansive modifying agents to impart controlled expansion in the plastic state.

### USES

- Masterock Basic is designed for free flowing in between highly congested reinforcement located in difficult to reach areas.
- Reinstatement of large, structural sections of concrete.
- Repairs of concrete due to alkali silica reaction.
- It is formulated for a wide range of application such as encasement builds ups, jacketing etc.

### DESIGN CRITERIA

Masterock Basic is designed for application in section upto 100 mm deep. For larger section the addition of approved aggregates may be required depending on the specific configuration of the repair location.

### TYPICAL PROPERTIES

The following values were obtained at Water: Powder ratio of 0.145@ 30°C

- Wet Density @ 30°C : 2.300 kg/m<sup>3</sup> ± 50 kg/m<sup>3</sup> depending on the consistency used at 72°C
- Compressive strength N/mm<sup>2</sup>, tested on 70.5 mm cubes 1
  - 3 days 30 N/mm<sup>2</sup>
  - 7 days 45 N/mm<sup>2</sup>
  - 28 days 60 N/mm<sup>2</sup>
- Tensile strength : 5.0 N/mm<sup>2</sup> @ 28
- Flexural strength : > 9.0 N/mm<sup>2</sup> @ 28
- Free expansion : Unrestrained expansion
- Permeability (DIN 1048 Part 5) : < 10 mm
- Water to powder ratio: : 0.140 to 0.150 per 1.0 kg of product

### FEATURES & ADVANTAGES

- Non Shrink : Delivers positive expansion in plastic state.
- Workability : Can be pumped or poured into restricted locations.

## MASTEROCK BASIC

**SINGLE COMPONENT, NON-SHRINK CEMENTITIOUS FREE FLOWING MICROCONCRETE**

- Adhesion : Exceptional bond to concrete substrate without independent primer.
- Non segregation : Highly stable segregation free micro concrete
- High early strength : Ensure rapid installation.
- Iron free : No metallic iron is included in the mix that leads to further deterioration due to rust expansion
- Factory pre-packed ready to use to overcome site batch variations.
- Chloride free : Good early strength development without the use of chloride.
- Self compacting nature eliminates honey combing and displace air without vibration
- High strength and low permeability provide maximum protection against carbon di-oxide and chlorides
- Other features : For large repairs, the mix may be modified by the addition of 5 mm to 10 mm clean, graded dry aggregates. Wet Density @ 30°C : 2300 kg/m<sup>3</sup>

### DIRECTION FOR USE

#### SURFACE PREPARATION

The substrate should be cleaned and free from loose materials and contaminations such as plasters, oil, paint and grease. The damaged or deteriorated concrete must be exposed to a sound substrate. The form work should include drainage outlets for pre-soaking and, if beneath a soffit, provision for air venting. The unrestrained surface area of the repair must be kept to a minimum. Provision for suitable access points to pour or pump the mix should be in place. The repair concrete substrate should be saturated with clean water prior to placing. Free water should be removed prior to placing. In situation where enhanced bond strength is required to old concrete prime the substrate with Masterbond EP an epoxy bond primer or Masterbond SBR latex depending upon the situation. Consult Choksey's Technical Department for further information.

#### MIXING

A mechanically power mixer must be used to mix Masterock Basic. Water is first placed in the mixer followed by gradual addition of Masterock Basic. Continue mixing for at least 2-3 minutes until a smooth consistency is attained. Use 3.5 to 3.750 liters water per 25 kg bag for a flowable consistency.

#### PLACING

Place the mix immediately into the formwork by pouring in a continuous operation.

#### CLEANING OF TOOLS & EQUIPMENTS

All equipment's must be cleaned with water immediately after use. Hardened material must be removed mechanically.

## MASTEROCK BASIC

SINGLE COMPONENT, NON-SHRINK CEMENTITIOUS FREE FLOWING MICROCONCRETE

### COVERAGE

Each 25kg bag yields approx. 12 liters when mixed with 3.625 liters of water.

The coverage figures given are theoretical - due to wastage factors and the nature and variety of possible substrates, practical coverage may vary.

**PACKING-** 25 kg

### STORAGE

Masterock Basic should be stored on pallets in dry conditions. It should be under cover from direct sunlight or extreme temperature. Under these conditions the product will have a shelf life of 6 months from the date of manufacturing.

### HEALTH & STABILITY

Masterock Basic contains cement powders which, when mixed with water or upon becoming damp, releases alkalis which can be harmful to skin. During use, avoid inhalation of the dust and contact with the skin or eyes. Wear suitable protective clothes- eye protection, gloves and respiratory equipment (particularly in confined spaces). 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.