

# Talrakmicrocrete® F

## Dual Shrinkage Compensated Non-Shrink, Cementitious, Flowable Micro Concrete with Fiber Reinforcement for Repairs and Rebuilding



The Construction Alchemists

### Description

Talrakmicrocrete® F is a prepacked cementitious powder product which includes, synthetic fibers, graded fillers, and additives. It has dimensional stability both in the plastic and in the hardened state, as it is based on dual shrinkage compensation technology. It needs only addition of clean mixing water to produce a flowable, non-shrink micro concrete. The low water requirement ensures high early strength with long-term durability and modified elastic modulus due to the presence of fibers. For larger repairs, the mixed Talrakmicrocrete® F may be modified by the addition of 6 mm clean, coarse graded, aggregates in saturated surface dry condition, at site.

### Features & Benefits

- Dual shrinkage compensated - Volume stable in wet and hardened state.
- Contains fibers – resistant to cracking
- Factory produced and prepacked- Consistent quality of the mixed material
- Impermeable to aggressive elements - Long life repairs
- Pourable consistency - easy to place, needs no vibration for compaction.
- Dimensionally stable for hygrometric shrinkage
- Suitable for vertical and horizontal applications.

### Primary Application

Talrakmicrocrete® F is the ideal material for use in vertical or horizontal structural repairs or rebuilding situations.

- Rigid gap filling applications in repair / partial rebuilding of R C members such as beams, columns and other structural elements.
- Repair of structural members subjected to cyclic loadings
- Encasement of beams, columns and other structural elements for strengthening and partial rebuilding applications.

### Technical properties

The following results were obtained at a Water/Powder ratio of 0.16 @ 30°C and a RH of 60%.

#### Compressive Strength

Age (days)	24hrs	3 days	7 days	28 days
Min.Compressive strength (MPa)	25	35	45	65

#### Flexural Strength

Age (days)	7 days	28 days
Min. Flexural strength (MPa)	2	3

Flexural strength is in accordance to ASTM D 412 - 87

### Specification Clause

Talrakmicrocrete F a fiber reinforced microconcrete shall be of flowable consistency that achieve a compressive strength of not less than 60 MPa after 28 days at 30°C. The fiber reinforced microconcrete shall not contain any metallic fibers, and fillers. It shall be free from chlorides and shall be dual shrinkage compensated. The unrestrained expansion shall be between 1 - 4%. The flexural strength shall not be less than 5MPa @ 28 days. The fiber reinforced microconcrete shall have a coefficient of thermal expansion similar to that of the host concrete. The mixed density of microconcrete shall be around 2100 kg/m<sup>3</sup> at 30°C.

### Application Instruction

#### Surface Preparation

The substrate shall be soaked with water to saturation. The formwork should be installed as required with provision for air escape on pouring the mixed material. Unrestrained surface area of the repair must be kept to a minimum. Appropriate Provision must be made to facilitate pouring or pumping the mixed micro-concrete in the form work. Defective concrete surfaces must be cut back to a sound base. Smooth surfaces should be mechanically roughened. Corroded reinforcing steel, if any, should be exposed around its full circumference and cleaned to remove all loose scale and corrosion deposits. It is important to clean the steel to a bright condition. Grit / sand blasting is recommended.

#### Mixing

Only full bags shall be mixed. Damaged or opened bags should not be used. Mix Talrakmicrocrete® F in a forced action pan mixer, or with a helical paddle attached to a low speed (300-600rpm) mixer for 3 minutes until a lump free, flowable consistency is achieved. Only use clean water. Mixing water needed: 3.5 to 4.0 liters per 25kg bag. Allow the mortar to rest for 2 - 3 minutes and then remix briefly before pouring into formwork. If temperature is more than 40°C then use chilled water for mixing.

Do not mix more number of bags of Talrakmicrocrete® F than that can be used within 15 minutes. Additional water shall never be added to vary the consistency.

#### Estimating Packaging

Talrakmicrocrete® F is supplied in 25kg bag

#### Yield

25kg of Talrakmicrocrete® F when mixed with a water:powder ratio of 0.17:1 (by weight) will yield 13 litre of mixed material.

#### Storage

Talrakmicrocrete® F has a shelf life of 6 months if kept in dry store in original, unopened containers. If stored at high temperature and/or high humidity conditions the shelf life may be reduced.

## Precautions

### Health & Safety instructions

Contact with the skin should be avoided as certain sensitive skins may be affected by contact. In such cases of contact, the skin should be washed immediately with soap and water-not solvent. Gloves and barrier creams should be used when handling these products. Eye contamination must be immediately washed with plenty of water and medical treatment sought.

Talrak



**Talrak Construction Chemicals Pvt. Ltd.**

An ISO 9001:2015 Certified Company

#### Works:

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#### Important note :

Talrak products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Talrak endeavours to ensure that any advice, recommendation specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation or information given by it.

Ref : TCC/TDS/RE05 - R I