

## Mixing

Add TAL MICROCRETE to water and mix for at least five minutes using an TAL approved forced action mechanical mixer.

## Application

Keep the unrestrained surface area of the repair to a minimum. The formwork should be rigid and sealed tight to prevent loss of material. The formwork should include drainage outlets for pre-soaking and, if beneath a soffit, provision for air release. Provide suitable openings to pour or pump the mixed TAL MICROCRETE into place. Allow for a minimum of 20 mm cover to steel reinforcement.

Apply TAL X-FORM WB or TAL X-FORM GP or other approved release agent to facilitate easy removal of the formwork after casting. Several hours before placing TAL MICROCRETE, saturate the substrate by filling the formwork with clean water.

Immediately before the placement of TAL MICROCRETE, completely drain water and seal the drainage outlets, leaving the substrate in a saturated surface dry (SSD) condition.

If the formwork cannot be filled with water, the substrate must be thoroughly hosed down with clean water to achieve an equal level of saturation. Again, the substrate must be in a saturated surface dry (SSD) condition immediately before placement.

Immediately after mixing, pump or pour the TAL MICROCRETE into the formwork. No vibration is required when TAL MICROCRETE is used in a fluid condition.

For cold weather application, refer to ACI 306R Cold Weather Concreting.

For hot weather application refer to ACI 305R Hot Weather Concreting.

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## Curing

Leave formwork in place until the compressive strength has reached 20MPa. Cure immediately after finishing using TAL BONDCURE, TAL X-CURE WB or water soak/polythene wrap.

## Limitations

Do not mix by hand.

Do not part mix; use only full bags.

Do not apply in rain or wet conditions or at temperatures below 5°C.

Do not expose to running water until product is cured fully.

## Shrinkage compensated fluid micro concrete

### Product Description

TAL MICROCRETE is a single component, shrinkage compensated, fluid micro concrete manufactured from selected cements, aggregates and additives. It can be used at a wide range of workabilities. When used as a fluid micro concrete it is self compacting. It has exceptional resistance to carbonation, chloride ingress, sulfate attack and freeze thaw attack.

### Advantages

- No primer required
- Shrinkage compensated
- High early strength
- Low permeability
- Excellent freeze/thaw resistance
- Self-compacting
- Single component

### Uses

- Large volume structural repairs
- As a concrete for use where reinforcement is congested
- Partial or full-depth placement of structural concrete elements
- Repair or replacement of spandrel beams, columns, balcony edges
- Restoration of:
  - Parking garages
  - Water and wastewater tanks
  - Tunnels, dams, bridges
  - Marine structures

### Laboratory Test Data

Property	Typical Results
Compressive strength MPa (psi)	18 (2600) 37 (5350) 60 (8700) 70 (10150)
Chloride content	< 0.1% by weight
Flow	10 to 35 seconds
Initial set	< 1 hour at 25°C
Final set	< 24 hours at 25°C
Initial expansion	< 4% within 24 hours
Expansion (3 to 28 days)	< 0.4%

\* Tests carried out on 50mm cubes, using 3.2L water per bag. Curing regime, plastic wrap and in air. Actual results in the field will vary as a result of different factors such as how long the product has been stored, storage conditions, temperature, actual water content, curing regime, quality of samples, compaction method and the type of equipment used for sample preparation & testing.

### Volatile Organic Content

VOC = <10 g/L

### BS EN 1504 - Part 3 Classification

Class R4 (Structural)

### Packaging

25kg bags.  
Water content: 3.2 to 3.5L

### Yield

Approximately 12.5 liters per bag.

### Shelf Life

18 months when stored below 25°C under shade in a dry environment.

### Installation Guidelines

TAL provides detailed method statements on all its products for use in various applications. These must be referred to prior to starting work. The information below is a summary intended for guidance only.

### Surface Preparation

Concrete substrate must be structurally sound. Loose or unsound concrete should be removed. Surfaces must be entirely free of oil, grease, paint, corrosion deposits, dust, laitance or other surface deposits. Saw cut around the edge of the repair to a minimum depth of 10mm. Reinforcing steel should be fully exposed with enough room behind the steel for the micro concrete to be able to flow around.

### Protection of reinforcement steel

Remove all corrosion from the exposed steel in accordance with ICRI Technical Guideline No 03730. For additional protection against corrosion and to protect the adjacent edges of the repair, coat the steel with TAL GALZINC. The steel may also be protected using TAL EPOXYBOND or TAL LATEX mixed with cement. Prior to using either of these products, please consult with an TAL Authorized Technical Specialist.

### Substrate Priming

After surface preparation has been completed, the substrate should be soaked with water and not allowed to dry out. This is normally the only priming required.

### Priming with TAL EPOXYBOND

In immersed conditions or where the maximum possible bond strength is required; where a saturated surface dry substrate is not possible or a chloride barrier is required, TAL EPOXYBOND should be used. Mix the entire contents of **Part A** with the entire contents of **Part B** until a uniform colour is achieved. Brush the mixed material into the surface of the substrate, taking care to avoid ponding or excessive application. TAL MICROCRETE must be applied while TAL EPOXYBOND is still tacky.