

THIS METHOD STATEMENT COVERS THE SURFACE PREPARATION, MIXING & APPLICATION OF **Ucrete MF (4mm – 6mm)**

**METHOD STATEMENT: Ucrete MF (4mm – 6mm)**

**1. PREPARATION:**

- 1.1. At the time of installation of the **Ucrete MF** the substrate concrete should have a minimum tensile strength of >1.5 MPa (tested / confirmed on site), be more than 7 days old and the surface should be dry.
- 1.2. Surface laitance must be removed by mechanical action using suitable equipment including Captive Shot Blasting equipment, and Scarifiers (preferred method). Diamond grinding can be used for small scale edge work etc. but should NOT be considered for large areas UNLESS it can be followed by captive blasting. Prepared concrete surface should have a **CSP 5-6** finish as a minimum.
- 1.3. Anchor / Termination grooves (see below) to be cut into the substrate where not already present.

**2. Detailing – Anchor Grooves and Termination Grooves.**

- 2.1. Anchor / Termination grooves must be present in the surface of the concrete within 75 mm of all 'free edges' and are typically cut into the surface with a suitable concrete groove cutter (double bladed – Hilti). 'Free Edges' includes all joints, column bases, perimeter walls, drainage channels, door thresholds etc. **and every 4 m across the floor in both directions.**
- 2.2. Anchor grooves are also required wherever movement is expected including adjacent to stainless steel channels, machine bases, around columns and at any construction joint in the substrate.
- 2.3. **NB: Anchor / Termination grooves are nominally square in section for the Ucrete Systems and should be twice the thickness of the floor in both width and depth.**  
**ie: 4 mm thick Ucrete MF – 8 mm x 8 mm      6 mm thick Ucrete MF – 12 mm x 12 mm**
- 2.4. Anchor Grooves / Termination grooves should be included on both sides of all day joints within the substrate in preparation for a joint, should movement subsequently occur.
- 2.5. At soft joints subject to traffic and at channels, the Anchor Grooves should abut the joint to provide extra protection to the arris against impact and to prevent the ingress of liquids under the floor in the event of sealant failure.

**NB: Refer to Master Builders Solutions detailed sketches for anchor and termination grooves as found in the Ucrete Applicator Manual (2018).**

**3. PRIOR TO INSTALLATION:**

**3.1. Storage**

Materials should be stored under cover, out of direct sunlight and preferably in a temperature-controlled environment for at least 48 hours prior to usage. **PTC** must be raised off the floor and kept dry. **PTA** and **PTB** and the **Sachet of Liquid Polykit Pigment** must be protected from temperature extremes.

**NB: Required storage temperature 15°C - 22°C.**

The substrate concrete should be installed to the tolerances required of the finished floor. Any repairs to the substrate or correction of levels etc. should be done in good time prior to the installation of the **Ucrete MF**.

**4. INSTALLATION OF THE UCRETE MF:**

**4.1. Ideal application temperatures are 12°C to 25°C.**

**4.2. The mixed Ucrete MF should be within 15°C to 20°C range during installation.** Once laid **Ucrete** will cure very effectively even at low temperatures.

**Applications should not proceed if the temperature is expected to be less than 3°C below the dew point at any time during the operation and humidity levels above 50%**

**4.3. NB: End Use Service Temperatures: (a) 4 mm – 6 mm (-15°C to + 70°C)**

**4.4. Summary of Storage, Mixing and Application Temperatures.**

Item	Temperature
Material Storage Area	15°C to 22°C
Mixed Material	15°C to 20°C
Application area (Ambient)	12°C to 25°C
Substrate Surface	12°C to 25°C

**NB: Ucrete** should not be applied in direct sunlight or to very hot substrate surfaces.

**5. Scratch Coat 1 mm**

**5.1. Option 1: UCRETE PRIMER FS – (Scratch Coat 1 mm)  
(Fast Setting - Heavy Duty Fast Slurry Primer)**

**UCRETE PRIMER FS** should not be applied on to:

- Damp substrates - Concrete and other cementitious substrates must be visibly dry.
- Weak substrates - the average pull-off strength must be **>1.5 N/mm<sup>2</sup>**.

- Application to substrates of lower strength may affect the long-term performance of the applied flooring. This is particularly relevant in areas subject to heavy use be it thermal or mechanical.

#### **5.1.1. MIXING:**

- 5.1.1.1. Pour the contents of the **PTA (Red Cap – 2.83 kg)** and the **PTB (Blue Cap – 2.86 kg)** into a 20 L polyethylene mixing pail and mix using a suitable low speed hand held mixer with a **Collomix KR** type mixing head for 20 seconds.
- 5.1.1.2. Add the **PTC bag (7 kg)** and continue mixing for a further 2 minutes or until the mix becomes homogeneous. **DO NOT overmix.**
- 5.1.1.3. The working life is approximately 10 minutes. Multiple units may be mixed, but **Do Not** mix more material than can be applied in 10 minutes.

#### **5.1.2. APPLICATION OF UCRETE PRIMER FS:**

The **UCRETE PRIMER FS** is applied by Squeegee or Steel Trowel at:

**1.6 kg/m<sup>2</sup> (1mm)**

**NB: Maximum (3 kg/m<sup>2</sup> can be applied - 1.85 mm)**

- 5.1.2.1. Above coverage rate will depend on substrate profile and does not include any wastage.
- 5.1.2.2. **Mixed material should be poured out immediately onto the floor otherwise it will Exotherm very quickly and set (in the bucket)**
- 5.1.2.3. Mixed material should not be left in the mixing bucket as it will react and give off considerable heat.
- 5.1.2.4. Anchor grooves 8 mm x 8 mm (**maximum**) can be filled out with the **UCRETE PRIMER FS**. Larger anchor grooves must be brushed out and filled with the subsequent **UCRETE System**.
- 5.1.2.5. The subsequent over-coating / application can be carried out when the **UCRETE PRIMER FS is tack free** typically as follows.

- (1) **12 Hours at 10°C - 15°C**
- (2) **8 Hours at 20°C**
- (3) **6 Hours at 30°C**

**The above timings are dependent upon both temperature and humidity. If the humidity is <50% a delay in setting / curing of the UCRETE PRIMER FS can be expected and overlayment times would need to be extended.**

5.1.2.6. Ensure that **UCRETE PRIMER FS** has been correctly applied and cured. The use of **UCRETE PRIMER FS** is recommended to ensure the best surface finish and to aid application by reducing resin absorption into the concrete.

5.1.2.7. **At low temperatures and low humidity these times may be extended. The surface MUST be dry to the touch before overlaying – ideally the primer should be left overnight (12 hours).**

**NB:** Should the primer coat be left for more than 48 hours; mechanical surface preparation will be required to produce a suitable surface for the application of the body coat. This will necessitate re-priming.

## 5.2. Option 2: UCRETE MF

### 5.2.1. MIXING:

5.2.1.1. **Ucrete MF** consists of four components.

5.2.1.2. Mix the **Ucrete MF** components **PTA (Yellow Cap) (2.52 kg)** and **PTB (Blue Cap) (2.86 kg)** and the **Sachet of Liquid Polykit Pigment (0.5 kg)** together for 1 minute with a slow speed drill and paddle (**Collomix KR**) and at 300 – 350 rpm to create a uniform dispersion.

5.2.1.3. The mixed material should then be transferred into a suitable clean mixing container and then gradually add the **PTC aggregates (14.40 kg)** whilst mixing continues for typically 3 - 4 minutes (MAX). Only whole units are to be mixed. Nothing is to be added or left out. **DO NOT OVER MIX**

5.2.1.4. DO NOT mix more than two units at a time. Transport and discharge the mixed material on to the substrate as quickly as possible.

### 5.2.2. APPLICATION OF UCRETE MF:

5.2.2.1. The **Ucrete MF** scratch coat is applied by squeegee or steel trowel at 2 kg/m<sup>2</sup>.

5.2.2.2. Above coverage rate will depend on substrate profile and does not include any wastage.

5.2.2.3. **Mixed material should be poured out immediately onto the floor otherwise it will Exotherm very quickly and set (in the bucket).**

5.2.2.4. Mixed material should not be left in the mixing bucket as it will react and give off considerable heat.

5.2.2.5. Anchor grooves 8 mm x 8 mm (**maximum**) can be filled out with the **Ucrete MF** scratch coat. Larger anchor grooves must be brushed out and filled with the subsequent **UCRETE** System.

5.2.2.6. The subsequent over-coating / application can be carried out when the **Ucrete MF** is tack free typically (18-24 hours).

5.2.2.7. The above timings are dependent upon both temperature and humidity. If the humidity is <50% a delay in setting / curing of the **Ucrete MF** can be expected and overlayment times would need to be extended.

**NB:** Should the scratch coat be left for more than 48 hours; mechanical surface preparation will be required to produce a suitable surface for the application of the body coat. This will necessitate re-priming.

**6. APPLICATION OF UCRETE MF (Total System Build Up at 4 mm – 6 mm)**

**ENSURE the room and materials to be used are ALL at the correct temperature (12°-25°C MAX).**

- 6.1. Mix the **Ucrete MF** as above in **item 5.1.1.**
- 6.2. The length of the application bay should be such as to produce a strip of material along the whole length of the bay from a single or double mix to allow for efficient trowelling and maintaining a wet joint for finishing.
- 6.3. **Recommended maximum length of any application bay is as follows:**

Thickness	Bay Size Width (Max)
4 mm	4 m - 6 m long (1 mix)
6 mm	4 m long (1 mix)

- 6.4. Spread the mixed **Ucrete MF** evenly over the substrate using a pin screed or surface notched scraper set to the correct thickness (3-5mm) at the following coverage rates.
  - 3 mm: 6 kg/m<sup>2</sup>**
  - 5 mm: 10 kg/m<sup>2</sup>**

**NB: Above coverage rates will depend on substrate profile and do not include any wastage.**

- 6.5. Immediately lightly spike roller the **Ucrete MF** to assist flow and to release any trapped air. The main purpose of the spike roller is to produce an even resinous surface. In order to reduce the possibility of colour and gloss variation, do not roll more than 100 mm into the previous mix.
- 6.6. **To ensure an even finish, the trowelling and spike rolling should be completed before the mix is more than 5 minutes old.**
- 6.7. **Do not apply when atmospheric condensation is occurring or likely to occur before full cure is attained, i.e., when the dew point is reached or when the ambient or substrate temperature is within 3°C of the dew point. Normally full cure is reached after 24 hours, but under very cold or very dry conditions this may be extended to 48 hours.**

- 6.8. Expansion joints etc in the **Ucrete MF** are best produced by saw cutting the material with a double-bladed joint cutter approx. 24 hours after application (temperature dependent). All joints to be cut BEFORE there is any major change in ambient temperature (cold rooms etc).
- 6.9. **MasterSeal CR 460** Joint Sealant to be applied as per **Master Builders Solutions Method Statement**.

## 7. POST INSTALLATION:

- 7.1. No Building Trades or traffic to be allowed on to the freshly laid **Ucrete** for at least 24 hours at 15°C to 20°C, longer at lower temperatures.
- 7.2. The cutting and sealing of joints to take place within the recommended time frame and no other trades should have access until the sealant has cured sufficiently to resist damage.
- 7.3. If the floor is to be handed to the client in a pristine condition, then it must be protected from other trades. Full protection of the whole floor by temporary covers consisting of polyethylene sheeting overlaid with hardboard, or plywood depending on the trades and traffic to have access, with joints taped and fixed. Ensure the floor is completely tack free at the time of covering, typically after 24 hours at 15°C to 20°C.

### NOTE:

The above guide provides a summary of the installation of a **Ucrete MF** floor and should be read in conjunction with our technical data sheets and Applicator Manual (2018).

The **Ucrete** Applicator is a specialist in the installation of **Ucrete** floors and is to install the floor in accordance with our current guidelines and best site practice.

**UCRETE INDUSTRIAL FLOORING** is only available from:  
**Master Builders Solutions Construction Chemicals LLC, P.O. Box 37127, Dubai, U.A.E.**

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