



Technical Data Sheet

Ultra Flow 45



Product

Ultra Flow 45 is a modified single component self levelling and pourable cementitious compound for bulking and underlayment for terrazite or similar fast setting resin flooring overlays.

Description

Ultra Flow 45 is a rapid hardening self levelling compound, high polymer modified cementitious material, designed for bulking and underlayment for high early strength resin flooring overlays similar to Terrazite. Ultra Flow 45, has been formulated to provide a tough flat surface to the resin flooring overlay as well as bond to any bulking system that may form the lower substrate.

Recommended Uses

- Base or bulking sub base for resin flooring overlays.
- Stand alone overlays.
- Tough hard wearing.
- Residential, commercial and industrial applications requiring light to medium duty.
- Application thickness 6mm - 20mm as overlay. Up to 300mm thickness when used as a binder for flow through bulking.

Features & Benefits

- High flow properties.
- Rapid curing and hardening.
- Base for sub base for resin flooring systems.
- Underlay or bulking system flexibility.
- Fast application for fast reinstatement.

Performance Properties

Typical Compressive Strength

Tested in accordance with AS1012.9 at 20C and AS2073

Age	Compressive Strength
1 day	15-20 Mpa
28 days	40-45 Mpa

Typical Flexural Strength

Tested in accordance to ASTM C348 at 20C

Age	Flexural Strength
28 days	4-8 Mpa

Typical Flowability

Tested in accordance to BS890 flow cone at 20C

Initial Flow	200-300mm
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Typical Bond Strength

Tested in accordance to ASTM C882

Age	Compressive Strength
28 days	> 5 Mpa

Typical Setting Times

Vicat setting times at 20C

Initial Set	20C	50 minutes
	30C	40 minutes
Final Set	20C	60 minutes
	30C	50 minutes

Typical Working Time

Temp	Time
10 C	50-60 minutes
20 C	30-40 minutes
30 C	20-30 minutes

Application Thickness

Minimum	6mm as overlay
Maximum	30mm as overlay

Fresh Wet Density

1850kg/m³ approx. (Tested in accordance to AS1012.5)

Traffic Time 20°C

Foot Traffic	2 hours
Vehicle Traffic	4-6 hours

Application Temperature

Minimum	5 C
Maximum	30 C

Abrasion Resistance

Tested in accordance to ASTM C501-1984 (Taber Abrasion)

Time	Wear Index
28 days	300-350

Comparison Chart

Product	Wear Index	Classification (resistance to wear)
Ceramic Tile	142	Very High
(Bassalt) Bluestone	29	Poor
Concrete 30Mpa	36	Poor
Concrete 60Mpa	71	Low
Cast Iron	99	Low-High

Coverage

The approximate coverages are obtained if mixed in accordance with recommended procedures and accurately measured water content.

Thickness	Area m ² per 20kg bag
6mm	2.2
8mm	1.6
10mm	1.3
12mm	1.1
15mm	0.8
20mm	0.6

When Ultra Flow 45 is used as a bulking system binder and integral overlay of 6mm thickness approximately 3x20kg bags /50mm/m depth will be required.

Maximum Water Requirement per 20kg Bag

4.1 litres

Packaging

Ultra Flow 45 is supplied in a 20kg polylined bag.





Application Instructions

Substrate Surface Preparation

Ensure the concrete substrate is clean and free from oil, grease, sealers, curing compounds, paints, polymer coatings, dust or other foreign (bond breaking) matter. Excess bitumen, adhesive or laitance should be removed by light scabbling or mechanical captive shot blasting. Followed by vacuum to remove debris and dust. Large cracks or holes may be filled using equal parts of Ultra Flow 45 and clean fine sand made up to a trowellable consistency.

Ensure the substrate is primed with Primer prior to carrying out application. New concrete floors must be at least 14 days old prior to application of Ultra Flow 45.

Note:- New concrete floors need to be 5.5% moisture content prior to Ultra Tuf application. If this cannot be achieved use Moisture Barrier.

When bulking up with Ultra Flow 45, ensure that clean rounded 14mm graded aggregate suitable for use in concrete is spread, levelled over the primed surface leaving a clear 5/6mm for the compound to rise to the top of the aggregates before covering to finished underlay levels.

Priming

Prime clean dust free concrete substrate with Primer using a brush, broom or roller. Allow primer to reach a tacky consistency before applying Ultra Flow 45.

DO NOT DILUTE PRIMER

Mixing of SureLevel SL Primer

Primer Bottle Content (5 Litre).

Add contents of 5 Litre Primer bottle into a clean empty 20 litre pail. Add 10 litres of clean water to the Primer giving a volume of 15 litres of Primer.

Note:- Do not dilute more or less than 2 parts water x 1 part primer at any time. Apply Primer at 4-5m²/litre per coat.

DO NOT APPLY Ultra Flow 45 TO UNPRIMED SURFACE

Do not allow dust film to cover primed area prior to application of Ultra Flow 45. If this occurs the area must be reprimed with Primer prior to proceeding with application of Ultra Flow 45. For concrete substrates subject to rising damp or moisture a waterproof membrane is required. It is recommended that Moisture Barrier be used as the primer. (Contact office for further details).

Mixing

Ultra Flow 45 requires 4.1 litres of water (depending on desired consistency). To a clean mixing bucket, add the Ultra Flow 45 powder to the pre-measured water ensuring product is being mixed during powder addition. When all the Ultra Flow 45 is added to the water, mix for a further 2-3 minutes until a smooth homogeneous consistency is obtained. Ultra Flow 45 is supplied in ready to use form requiring only the addition of water. Ensure the product is mixed for a minimum of 5 minutes.

DO NOT MIX BY HAND

Ultra Flow 45 must be mixed with a mechanical forced action mixer with high shear stirrer.

DO NOT ADD EXCESS WATER

Discard any material that has hardened or stiffened.

Placing

Pour the mixed material on to the primed substrate or on to the bulked up aggregate area starting at one end and allowing the material to seek its own level and required thickness. Material may be spread with a steel trowel, spreader or squeegee. Keep the trowel slightly inclined to obtain desired thickness. To ensure uniform consistency and uniform continuous flow application of Ultra Flow 45, it is advised that subsequent mixes are ready to enable continuous pouring until the area to be levelled is complete. Protect the finished area from damage until Ultra Flow 45 has dried. For very large areas Ultra Flow 45 can also be applied using an automatic pump. (Consult office for further information).

Curing

No special curing is required. The addition of water to Ultra Flow 45 after it has started to stiffen is not recommended and the product should be discarded.

The recommended application thickness ranges from 6mm to 20mm in a single application. (Consult office for further information).

Precautions

- Do not use in temperatures greater than 30 degrees as flash setting will occur. □
- Ultra Flow must not be used in areas subject to occasional or permanent wetting or where back water pressure is likely.
- Ultra Flow 45 must not be permitted to come into contact with water at any stage during use.
- To avoid too rapid drying, protect applied Ultra Flow from direct sunlight or drying winds during actual application, and while curing for up to 24 hours.
- If the substrate on to which Ultra Flow 45 is applied moves or cracks, reflective cracking will occur in the Ultra Flow 45.
- Do not cover with final resin flooring until the compound is dried sufficiently over 5-7 days depending on ambient temperature. □
- New concrete surfaces must be at least 14 days old prior to application of Ultra Flow 45.

Substrates

For concrete substrates subject to rising damp or moisture, a water proof membrane barrier coating is required. It is recommended that Moisture Barrier be used as the primer. (Contact office).

Yields

The approximate yields are obtained if mixed in accordance with recommended procedures and accurately measured water content. A 20kg bag of Ultra Flow 45 with 4.1 litres of water will yield approximately 13 litres. 77 bags required per cubic metre. A 20kg bag of Ultra Flow 45 will cover approximately 1.3m² at 10mm thick, or 1m² at 13mm thick, or 2.2m² at 6mm thick.

Ultra Flow 45 used as a bulking/underlay combination with graded rounded 14mm clean aggregates will yield approximately 50 litres volume to 3 bags of compound when mixed with the required maximum water volume.

Clean Up

Ultra Flow 45 should be removed from tools and equipment with clean water immediately after use.

Storage

Ultra Flow 45 has a shelf life of approximately 8 months if kept in a dry environment completely away from moisture.

Health and Safety

This product is classified as hazardous according to criteria of Work Safe Australia. Material containing Portland Cement and sand now fall into this category.

- During use avoid inhalation of dust, contact with skin and eyes.
- Suitable protective clothing, dust masks, gloves and eye protection should be worn.
- Continual or extended contact with cement products can cause skin irritation.
- If skin irritation occurs, remove contaminated clothing and flush skin thoroughly with water for a minimum of 15 minutes. Contact Poisons Information Centre or consult medical adviser.
- Material Safety Data Sheets (MSDS) are available on request from the office. Read the MSDS and product data sheet carefully before using any product.

Fire

Ultra Flow 45 is non flammable.

Part Number

SF-UFL