

technical data sheet

ULTRALEVEL SL

Polymer Modified Self Levelling Cementitious Underlay

PRODUCT

Ultralevel SL is a self-levelling polymer modified cementitious underlay.

DESCRIPTION

Ultralevel SL is a rapid hardening self-levelling, single component cementitious underlay. Ultralevel SL has been formulated to achieve a smooth flat surface with ease of application and maximum flow without any shrinkage or cracking.

RECOMMENDED USES

- Underlayment for floor coverings such as carpet, ceramic tiles, vinyl, parquetry etc.
- Fast repairs of uneven concrete floors
- Residential, commercial and medium industrial application
- Application thickness from feather edge to 120mm in a single application
- New construction and refurbishment projects
- Flat smooth surfaces over existing concrete slabs
- Levelling existing uneven concrete floors
- New construction and refurbishment projects.

FEATURES & BENEFITS

- Accepts foot traffic in 2 hours
- Reinstating large areas in relative short time periods
- Very fast application
- Dimensionally stable
- Single component product, just add water
- Installation can be carried out in a single application
- Rapid curing
- Can be applied directly onto prepared concrete surfaces
- Eliminates the need for sand and cement screeds
- Floor covering may be applied next day.

PERFORMANCE PROPERTIES

COMPRESSIVE STRENGTH

Tested in accordance to AS10129.9, AS2073 at 20°C.

Age	Compressive Strength
1 day	15Mpa
3 days	22Mpa
7 days	25Mpa
28 days	35Mpa

FLEXURAL STRENGTH

Tested in accordance with ASTM C348-86 at 20°C

Age	Compressive Strength
1 day	3.5Mpa
3 days	4.5Mpa
7 days	7.8Mpa
28 days	11.0Mpa

FLOWABILITY

Tested in accordance to BS890 flow cone at 20°C.

Initial flow	280 - 300mm
Flow after 10 minutes	270 - 290mm

BOND STRENGTH

Tested in accordance to ASTM C882 - 1987 Slant/Shear method

Age	Strength
7 days	> 3Mpa
28 days	> 5Mpa

SETTING TIMES

Vicat setting times at 20°C

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

WORKING TIME

Temperature	Times (minutes)
10°C	50 - 60 minutes
20°	30 - 40 minutes
30°	40 - 50 minutes

APPLICATION THICKNESS

Minimum	Feather edge
Maximum	120 mm

COEFFICIENT OF THERMAL EXPANSION

10 - 12 x 10⁻⁶ mm/°C

FRESH WET DENSITY

1860 kg/m³ approx. (tested in accordance to AS1012.5)

TRAFFIC TIME 20°C

Foot traffic	2 hours
Vehicle traffic	12 hours
Time to cover with floor covering (overlay)	< 10mm 12-18 hours > 10mm 24 hours

APPLICATION TEMPERATURE

Minimum	5°C
Maximum	30°

DRYING TIME

Tested in accordance to AS1012.13

Time (days)	Shrinkage (Microstrain)
7 days	< 150 Microstrain
28 days	< 400 Microstrain
56 days	< 600 Microstrain

WATER REQUIREMENT PER 20 KG BAG

4.3 litres

PACKAGING

Ultralevel SL is supplied in a 20 kg polylined bag.

COVERAGE

The approximate coverages are obtained from a 20kg bag if mixed in accordance with recommended procedures and accurately measured water content.

Thickness	Area m ³ per 20 kg bag
2mm	6.5
4mm	3.3
5mm	2.6
6mm	2.2
8mm	1.6
10mm	1.3
13mm	1.0

APPLICATION INSTRUCTIONS

Substrate and 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 or grinding, followed by vacuuming to remove debris and dust. Large cracks or holes may be filled using equal parts of Ultralevel SL and clean fine sand made up to a trowellable consistency. The substrate must be primed with Ultralevel Primer prior to carrying out application. New concrete floors must be at least 14 days old prior to application of Ultralevel SL.

PRIMING

Concrete Floors:

Prime the clean dust free concrete substrate with Ultralevel Primer using a brush, broom or roller. Allow primer to reach a tacky consistency before applying Ultralevel SL. Approximate drying time for the primer is 40 - 60 minutes at 50% RH and 25°C.

Ultralevel Primer is supplied in a concentrate form and should be diluted 2:1 with water, 2 parts water to 1 part Ultralevel Primer Concentrate. Primer will dry in approximately 40-60 minutes depending on substrate and/or temperature. Extremely porous substrates such as weather damaged slabs, aerated lightweight concrete etc., and may require a second coat of primer to avoid pinholes or bubbles in the levelling compound.

If a second coat is required allow the first coat to dry prior to application of consecutive coat. Apply primer at 8-10M³ / litre.

DO NOT APPLY ULTRALEVEL SL TO UNPRIMED SURFACE.

Do not allow dust film to cover primed area prior to application of Ultralevel SL. If this occurs the area must be reprimed with Ultralevel Primer prior to proceeding with application of Ultralevel SL. For concrete substrates that contain greater than 5.5% moisture content or are subject to rising damp or moisture, a moisture barrier is required. It is recommended that Bostik Moisture Seal be used. Moisture Seal should be used as a primer prior to application of Ultralevel SL. Moisture Seal should be diluted 50% with water and applied over existing two (2) coat application of Moisture Seal. (Consult Bostik office for further details).

Non-Absorbent Floors:

For application of Ultralevel SL to non-porous substrates contact your nearest Bostik office for priming specification.

MIXING

Ultralevel SL requires 4.3 litres of water per 20 kg bag and is best mixed with a forced action, high shear stirrer, powered by a heavy duty electric mixing drill at approx. 600 r.p.m. Add pre-measured water to a clean mixing bucket. Gradually add Ultralevel SL into the water whilst continuously mixing the contents of the bucket. When the entire contents of the bag have been added to the water, mix for a further two minutes to produce a smooth homogenous consistency.

DO NOT MIX BY HAND.

DO NOT ADD EXCESS WATER.

Discard any Ultralevel SL that has hardened or stiffened in the mixing bucket. Further addition of water will NOT reconstitute a useable mixture.

PLACING

Pour the mixed material on the primed substrate and allow material to seek its own level. Ultralevel SL 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 Ultralevel SL, it is advised that subsequent mixes are ready to enable continuous pouring until the area to be levelled is complete. Protect the finished areas from damage until Ultralevel SL has dried.

For very large areas Ultralevel SL can also be applied using an automatic pump. (Consult Bostik office for further information).

CURING

No special curing is required. The addition of water to Ultralevel SL after it has started to stiffen is not recommended. Any Ultralevel SL that has not been placed whilst still fully fluid, should be discarded.

PRECAUTIONS

- Ultralevel SL must not be used in areas subject to occasional or permanent wetting or where back water pressure is likely.
- Ultralevel SL must not be permitted to come into contact with water at any stage during use.
- Ultralevel SL is not designed as a wearing coarse or as a water-proofing agent, and should only be used as an underlayment.
- To avoid too rapid drying protect from direct sunlight or drying winds during actual application, and while curing for up to 12 hours.
- If substrate on to which Ultralevel SL is applied moves or cracks, reflective cracking will occur in the Ultralevel SL.
- Depending on thickness and ambient temperatures Ultralevel SL can be covered with flooring materials in 24 hours.
- For large and thick sections it is advised to check the moisture content of Ultralevel SL prior to application of floor coverings.
- New concrete surfaces must be at least 14 days old prior to application of Ultralevel SL.
- Check concrete substrates for moisture content prior to application of Ultralevel SL.
- Do not mix by hand.
- Do not add excess water.

SUBSTRATES

For concrete substrates subject to rising damp or moisture, or where the moisture level of the concrete slab is greater than 5.5% or 70% relative humidity, a moisture barrier coating is required. It is recommended that Bostik Moisture Seal be used prior to application of Ultralevel SL. Bostik Moisture Seal may also be used as a primer coat prior to

application of Ultralevel SL. (Consult Bostik Office for further information).

YIELDS

The approximate yields are obtained if mixed in accordance with recommended procedures and accurately measured water content. A 20 kg bag of Ultralevel SL with 4.3 litres of water will yield approximately 13 litres. A 20 kg bag of Ultralevel SL will cover approximately 1.3 square metres at 10mm thick, or 1 square metre at 13mm thick, or 2.6 square metres at 5mm thick (refer Coverage Section).

The recommended application thickness ranges from feather edge to 120mm in a single application.

However, for economy, in large areas where thickness of greater than 20mm is required, Bostik recommends the addition of Bostik Patchfix Coarse Filler at an addition rate of 3 parts Ultralevel SL to 1 part Filler. (Consult Bostik for further information). The above application should be allowed to dry for 60-90 minutes followed by application with Ultralevel SL (unfilled) to achieve a smooth uniform surface (no primer is required). If the bulk out screed is allowed to dry for longer than 6 hours, it is imperative to prime with Ultralevel Primer prior to application of Ultralevel SL.

P.A.T.S (Pretested Adhesion To Substrate) Programme

Bostik offer a service in which a program has been established to eliminate potential field problems by pre-testing Bostik adhesives with samples of building materials to which the adhesive will be applied. This service is available on large projects where pre-application testing will aid in determining the proper surface preparation method to achieve optimum adhesion. Consult a Bostik representative for further information.

HEALTH AND SAFETY

Cement products are classified as Hazardous under General Health and Safety guidelines. Materials containing Portland cement are alkaline in nature and you should during use avoid inhalation of dust and 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 wash skin thoroughly with water for a minimum of 15 minutes. Contact Poison information Centre or consult medical advice. **Refer to Material Safety Data Sheet.**

CLEAN-UP

Ultralevel SL should be removed from tools and equipment with clean water immediately after use.

STORAGE

Ultralevel SL has a shelf life of approximately 12 months if kept in a dry environment completely away from moisture.

FIRE

Ultralevel SL is non flammable.

BOSTIK ULTRALEVEL SL

ITEM NUMBER	STOCK SIZE
267805	20 kg bag

ULTRALEVEL PRIMER

ITEM NUMBER	STOCK SIZE
269514	5 litre - concentrate

The representations and recommendations regarding the products are based on tests which we believe to be reliable. However, no guarantee of their accuracy can be made because of the great range of field conditions and variations encountered in raw materials, manufacturing equipment and methods. Thus, the products are sold with a limited warranty only, and on the condition that purchasers will make their own tests to determine the suitability of the product for their particular purposes. Under no circumstances will Bostik Findley Australia Pty Ltd be liable to anyone except for replacement of the products or refund of the purchase price.

ALL SALES ARE EXPRESSLY LIMITED TO THE TERMS AND CONDITIONS OF SALE OF BOSTIK FINDLEY AUSTRALIA PTY LTD



ISO 9001 QS 9000
LIC QS 0087
Standards Australia

BOSTIK FINDLEY AUSTRALIA PTY LTD
Phone: +61-3-9279 9333
Fax: +61-3-9279 9240

BOSTIK FINDLEY NZ LIMITED
Phone: +64-4-567 5119
Fax: +64-4-567-5412

BOSTIK FINDLEY SINGAPORE PTE LTD
Phone: +65-863 4088
Fax: +65-863 4077

BOSTIK FINDLEY (MALAYSIA) SDN BHD
Phone: +606 764 3246
Fax: +606 764 3248

SYDNEY ADELAID
Phone: 02 8825 3488
Fax: 02 8825 3411

E
Phone: 08 8244 0511
Fax: 08 8244 0522

PERTH
Phone: 08 9331 7666
Fax: 08 9331 7677

BRISBANE
Phone: 07 3265 2377
Fax: 07 3265 5421

(ABN 79 003 893 838)

Product: Ultralevel SL
Issue Date: September 2001
Issue No: 1
Division: Construction
Total Pages: 3