

technical data sheet

ULTRALEVEL HD

Polymer Modified Self Levelling Cementitious Industrial Floor Overlay

PRODUCT

Ultralevel HD is a polymer modified single component self levelling cementitious heavy duty industrial floor overlay.

DESCRIPTION

Ultralevel HD is a rapid hardening self-levelling, polymer modified cementitious underlay and overlay. Ultralevel HD has been formulated for maximum flow and easy application to achieve a smooth, flat surface without any shrinkage or cracking.

RECOMMENDED USES

- Reinstatement of new or existing concrete floors subject to foot traffic, industrial equipment, fork lift traffic or trolleys.
- Use as final wearing coarse overlay or may be coated with an appropriate resin floor coating such as Bostik Epoxycote WB or Paveseal SB.
- Hard wearing, long lasting durable overlay
- Fast application, rapid cure minimises factory downtime.
- Residential, commercial and industrial applications, light to medium industrial applications
- Use as stand alone system
- Application thickness from 6mm-20mm in a single application

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.
- Floor coating can be applied 3 hours after application.

PERFORMANCE PROPERTIES

COMPRESSIVE STRENGTH

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

Age	Compressive Strength
1 day	20 Mpa
3 days	28 Mpa
7 days	32 Mpa
28 days	40 Mpa

FLEXURAL STRENGTH

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

Age	Flexural Strength
1 day	3.8 Mpa
3 days	7.6 Mpa
7 days	8.2 Mpa
28 days	11.5 Mpa

FLOWABILITY

Tested in accordance to BS890 flow cone at 20°C

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

BOND STRENGTH

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

Age	Flexural Strength
7 days	> 5 MPa
28 days	> 10 MPa

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°C	30 – 40 minutes
30°C	40 – 50 minutes

APPLICATION THICKNESS

Minimum	6 mm
Maximum	20 mm

COEFFICIENT OF THERMAL EXPANSION

7 – 11 X 10⁻⁶ mm/°C

FRESH WET DENSITY

1850 kg/m³ approximately (tested in accordance to AS1012.5)

TRAFFIC TIME

Foot Traffic	2 hours
Vehicle traffic	12 hours
Time to cover with floor covering (overlay) at 25°C	<10mm 3 hrs >10mm 24 hrs

DRYING/SHRINKAGE

Tested in accordance to AS1012.13

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

ABRASION RESISTANCE

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

Age	Wear Index
7 days	244
28 days	355

COMPARISON CHART

Surface	Wear Index	Classification (resistance to wear)
Ceramic tile	142	Very high
(Bassalt) Bluestone	39	Poor
Concrete 30MPa	36	Poor
Concrete MPa	71	Low
Cast Iron	99	Low-High

WATER REQUIREMENT PER 20 KG BAG

4.3 litres

PACKAGING

Ultralevel HD is supplied in a 20 kg poly lined bag

COVERAGE

A 20 Kg bag of Ultralevel HD mixed with 4.3 litres of clean water will yield approximately 13 litres. This quantity will cover approximately 2m² @ 6mm thick.

Thickness	Area m ² per 20 kg bag
6 mm	2.2
8 mm	1.6
10 mm	1.30
13 mm	1.0
20mm	0.65

Yield 80 bags per cubic metre.

APPLICATION INSTRUCTIONS

Surface preparation

Ensure substrate is clean, dry and free from oil, grease, sealers, curing compounds, paints, polymer coatings, dust or any other contaminant or coating that may affect the bonding of Ultralevel HD onto the substrate. All foreign material, e.g. bitumen, adhesive or laitence must be removed by mechanical means such as scabbling, capture shot blasting or grinding. The substrate must be primed prior to the application of Ultralevel HD

PRIMING

Concrete Floors:

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

Apply Ultralevel HD as soon as possible after Ultralevel Primer has dried or re-priming may be required. Extremely porous substrates, such as damaged slabs and aerated or lightweight concrete, etc, may require a second coat of Ultralevel Primer to avoid pinholes and bubbles in the Ultralevel HD. The first coat of primer must be dry before the application of the second coat.

Priming (Cont'd...)

Apply Ultralevel at 8-10m²/litre per coat after 2:1 dilution with water. (2 parts water, 1 part Ultralevel Primer). Brush out ponded primer to allow for even and complete drying of the Ultralevel Primer prior to the application of Ultralevel HD.

Non absorbent Floors:

For application of Ultralevel HD to non-porous substrates prime the entire area with Ultra NP Primer in accordance with Technical Data Sheet.

DO NOT APPLY ULTRALEVEL HD TO UNPRIMED SURFACE

MIXING

Ultralevel HD requires 4.3 litres of clean 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 approximately 600 r.p.m. Add pre-measured water to a clean mixing bucket. Gradually add Ultralevel HD 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 (2) minutes to produce a smooth homogenous consistency.

DO NOT MIX BY HAND

DO NOT ADD EXCESS WATER

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

PLACING

Pour the fully mixed Ultralevel HD onto the primed substrate and allow material to seek its own level. Ultralevel HD may be spread with a steel trowel, spreader or squeegee. Keep the trowel slightly inclined to obtain desired thickness of cover. To ensure uniform consistency and continuous flow of the fluid Ultralevel HD, it is advised that subsequent mixes are ready to enable continuous pouring until the entire area to be levelled is complete. Minimum thickness 6mm. Protect the finished areas from damage until Ultralevel HD has dried.

CURING

No special curing is required.

Application of Coatings:

Ultralevel HD has good resistance to water when cured. However, if areas are subject to continuous water immersion or chemical attack from solvents or organic acids etc, the Ultralevel HD must be protected using the Bostik range of floor coatings such as Epoxycote WB, Guardcote WB or Paveseal SB, depending on aesthetic and performance requirements. These coatings will act as sealers and dust-proof coatings which can be easily cleaned, and are resistant to oil and chemical spills. To ensure a long lasting, highly protective coating, it is recommended that two coats be applied. The first coat should be applied as soon as the Ultralevel HD has dried 2-3 hours after the application. The second coat applied after the first coat has dried. After that the coating should be regularly inspected for damage or wear and re-coated when required.

PRECAUTION

- Concrete substrates must be at least 21 days old.
- Do not over water.
- Do not hand mix.
- Can be walked on after 2-4 hours.
- Most floor coverings can be laid after 24 hours.
- Check moisture content in large/thick applications prior to laying floor coverings.
- Protect from direct sunlight or drying winds during cure.
- Do not use in areas subject to a hydrostatic head of pressure.
- Do not use in areas subject to constant contact with moisture.

SUBSTRATES

Concrete substrates that have a moisture content greater than 5.5% subject to rising damp or moisture, require a moisture vapour barrier prior to installation of Ultralevel HD. Contact your nearest Bostik office for application instructions on Bostik Moisture Seal to overcome damp substrate conditions.

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.

STORAGE

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

HEALTH AND SAFETY

Cement products are classified as hazardous under General Health and Safety guidelines and materials containing Portland cement are alkaline in nature.

- During use avoid inhalation of dust or contact with skin or eyes.

- Suitable protective clothing, dust masks, gloves and eye protection must be worn.
- Continual or extended contact with cement products can cause skin irritation.
- If skin contact occurs, remove contaminated clothing and flush skin thoroughly for a minimum of 15 minutes and see a doctor.
- If poisoning occurs, contact a doctor or Poisons Information Centre on Ph: 131126 Australia
- If swallowed, do not induce vomiting. Give a glass of water.
- For more detailed information refer to Material Safety Data Sheet.

CLEAN-UP

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

FIRE

Ultralevel HD is non flammable.

ITEM NO.	STOCK SIZE	COLOUR
ULTRALEVEL HD		
273945	20kg Bag	Grey
ULTRALEVEL PRIMER		
269514	5 Litre Bottle	Blue
ULTRA NP PRIMER		
269514	4 Litre Kit	Green
MOISTURE SEAL		
263362	8 Litre Kit	Grey
263370	20 Litre Kit	Grey
PATCHFIX COARSE FILLER		
272132	20kg Bag	Beige
GUARDCOTE WB		
289396	4 Litre Kite	Clear
289418	20 Litre Kit	Clear
PAVESEAL SB		
289450	4 Litre	Clear
289469	20 Litre	Clear
EPOXYCOTE WB		
289191	4 Litre	Clear
289205	20 Litre	Clear

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.

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