

## MAKLEVEL HD

### High Performance Rapid Hardening Polymer Modified Cementitious Self Levelling Overlay for Internal and External Applications

**Maklevel HD** is a rapid hardening, polymer modified cementitious underlay formulated for maximum flow without shrinkage or cracking. Application thickness feathered edge to 70mm.

#### RECOMMENDED USES

- Superior underlay for vinyl & timber floor coverings (may be used under carpet & tile if quick covering time is required)
- Reinstatement of new or existing concrete floors subject to foot traffic, industrial equipment, and forklift traffic or trolleys
- Residential, commercial and industrial applications
- Heavy industrial traffic
- Wet areas (not immersed)
- With under subfloor heating
- Internal and external applications
- As a stand-alone floor topping overlay

#### FEATURES AND BENEFITS

- Accepts foot traffic in 2 - 3 hours
- Single component, just add water
- Very fast application, single operation
- Dimensionally stable
- Rapid curing
- Receives vinyl & timber after 16 hours, carpet & tile after 6 – 8 hours

## TECHNICAL DATA SHEET

- Can be applied directly onto prepared concrete surfaces
- Application thickness up to 70mm
- High abrasion resistance
- Heavy Duty
- High compressive strength
- Floor coating such as epoxy/acrylic can be applied after 24 hours of final cure coat being applied
- Australian Made and Australian Owned

#### 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 **Makprime MP** in accordance with Technical Data Sheet.

##### SUBSTRATE PRIMING

Prior to carrying out the application the substrate must be primed with **Makprime MP**.

For concrete substrates that contain greater than 5.5% moisture content or are subject to greater than 70% relative humidity, rising damp or moisture, it is recommended that **Makproof Moisture Barrier** be applied as a vapour barrier. Refer to the **Makproof Moisture Barrier** Technical Data Sheet.

Floors treated with **Makproof Moisture Barrier** should be treated as a non-porous surface and primed with **Makrete Makprime MP**.

## POROUS FLOORS

Depending on the porosity of the substrate, **Makprime MP** can be used neat or can be diluted in a 3:1 ratio (3 parts of water to 1 part concentrate).

Apply **Makprime MP** to the prepared substrate using a brush, broom or roller in accordance with the relevant Technical Data Sheet.

Allow primer to reach a tacky consistency. Approximate drying times for the tackiness is 40-60 minutes at 50% RH and 25°C.

Extremely porous substrates such as weather damaged slabs, aerated lightweight concrete etc. 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 second coat.
- Apply second coat of primer ensuring any ponded primer is brushed out to allow for even drying. Ensure tackiness is reached prior to application of **Maklevel HD**.

## NON-POROUS FLOORS

**Makprime MP** (undiluted – neat).

It provides high strength film over impervious surfaces that will allow bonding of levelling compounds.

- Apply **Makprime MP** to the prepared substrate using a brush, broom or roller in accordance with the Technical Data Sheet.
- Allow the primer to dry. Approximate drying time is 1-2 hours at 50% RH and 25°C.

## MIXING

**Maklevel HD** requires 4.5 - 4.8 litres of potable 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 **Maklevel 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 2-3 minutes to produce a smooth homogenous and fluid consistency.

## CAUTION

**DO NOT MIX BY HAND**

**DO NOT ADD EXCESS WATER**

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

## APPLICATION

Primed areas should receive the **Maklevel HD** as soon as possible to avoid dust and surface contamination affecting adhesion of the **Maklevel HD** to the Primer.

- Pour the mixed material on the primed substrate.
- Depending on desired thickness, either allow material to seek its own level or spread the material with a steel trowel, spreader or squeegee. Keep the trowel slightly inclined to obtain desired thickness.
- Pour the next mix of material. To ensure uniform consistency and flow application, it is advised that subsequent mixes are ready to enable continuous pouring.
- For very large areas, **Maklevel HD** can also be applied using an automatic pump.

Consult Makrete for further information.

## CURING

Protect the finished area against damage during curing.

To avoid too rapid drying protect from direct sunlight or drying winds during actual application, and while curing for up to 12 hours.

## PRECAUTIONS

- **Maklevel HD** must not be used in areas subject to permanent wetting or where back water pressure is likely.
- If the substrate on to which **Maklevel HD** is applied moves or cracks, reflective cracking will occur in the **Maklevel HD**.
- For large and thick sections, it is advised to check the moisture content of **Maklevel HD** prior to application of floor coverings.
- Check concrete substrates for moisture content prior to application of **Maklevel HD**. For new concrete surfaces, it is recommended must be at least 21 days old prior to application of **Maklevel HD**.
- Do not mix by hand.
- Do not add excess water.
- If **Maklevel HD** is over-watered, do not place it onto the substrate. It must be discarded.
- In all cases, test areas must be performed to ensure suitability of the product for the intended use.
- Do not apply point loading on any areas or cracking may occur
- For heavy duty traffic it is recommended that a minimum of 15mm is applied
- For external application it is recommended that a surface sealer be applied to improve stain resistance
- Floor coatings can be applied 24 hours after final cure
- Do not use in immersed conditions
- Do not apply to areas subject to hydrostatic pressure refer to **Makproof Moisture Barrier** TDS

## COVERAGE

A 20kg bag of **Maklevel HD** mixed with 4.8 litres of potable water will yield approximately 12 litres.

To determine the number of bags needed per m<sup>2</sup>, use the formula:

Number of **Maklevel HD** bags =

$$\frac{(\text{Floor Area (in m}^2\text{)} \times \text{Application Thickness (in mm)})}{\text{Mix Volume (in litres)}}$$

Note: The values are estimates only and does not include wastage.

## CLEAN UP

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

## PACKAGING

**Maklevel HD** is supplied in 20kg poly lined bag.

## SHELF LIFE

**Maklevel HD** has a shelf life of 12 months in unopened bags. Must be stored in a cool dry elevated place and protected from humidity.

## HEALTH AND SAFETY INFORMATION

Avoid contact with skin. Protective gloves and clothing are recommended when mixing or using this product. Please refer to full Safety Data Sheet for this product, which is available from Makrete Building Solutions.

## TECHNICAL SPECIFICATIONS - PERFORMANCE CHARACTERISTICS

TEST	TYPICAL PROPERTIES (RESULTS) MPa				
Appearance	Powder				
Colour	Grey				
	Compressive Strength MPa				
		1 Day	3 Days	7 Days	28 Days
		10-15 MPa	15-20 MPa	30-35 MPa	40-45 MPa
Setting Time	Initial Set	Final Set	Reflow Time	Ready for foot traffic	Ready for floor covering
	1.5-2hrs	2-3 hrs	20-25 mins	2-3 hrs	6-8 hrs
	Flexural Strength MPa				
1 Day	4 MPa				
3 Days	5 MPa				
7 Days	10 MPa				
28 Days	11 MPa				
	Tensile Adhesion Strength				
1 Day	≥ 4 MPa				
28 Days	≥ 6 MPa				
Fresh Wet Density	Approx. 1.95 kg/m <sup>3</sup> - (tested in accordance with AS1012.5)				
	Application Thickness				
Minimum Thickness	1 mm				
Maximum Thickness	70 mm				
	Working Time				
Temperature	Times				
10°C	50-60 mins				
20°C	30-40 mins				
30°C	20-30 mins				
	Application Temperature				
Minimum	5°C				
Maximum	30°C				
Water Requirement per 20kg Bag	4.5 - 4.8 Litres				
	Abrasion Resistance				
Taber Abrasion	2000 cycles				
Abrasion Resistance Index	ARI <3%				

**CONTACT & TECHNICAL SUPPORT**  
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Product	MAKLEVEL HD
Issue Date	APR 2023
Issue No:	1
Item Code	MAKL11
Pack Size	20 kg Bag

#### **Product disclaimer**

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time.

The TDS should be carefully read and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied.

Our responsibility for products sold is subject to our standard terms and conditions of sale. Makrete does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.

The information and any recommendations relating to the application and end-use of all MAKRETE products are provided in good faith based on MAKRETE's knowledge and experience of the products. In applications, the differences in materials, and variances of substrates and actual site conditions can vary such that no warranty in respect of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be taken as inferred either from this information, or from any written recommendations, or from any other advice offered by MAKRETE. The proprietary rights of third parties must be observed. All orders are accepted subject to our sale terms and conditions.

It is recommended that all products be properly stored, handled and applied in accordance with the printed literature (TDS).

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.