

Setseal Ultra

High performance, flexible cementitious waterproof coating



Description

Setseal Ultra is a two-component; elastomeric polymer modified cementitious waterproof coating suitable for internal and external applications.

Setseal Ultra provides a hardwearing, seamless, waterproof membrane with excellent crack accommodation properties.

Applications

- ▲ Waterproofing of water retaining structures and reservoirs.
- ▲ Waterproofing of basements, roofs, and foundations.
- ▲ Waterproofing of swimming pools and fountains.
- ▲ Waterproofing of wet areas such as bathrooms and kitchens.
- ▲ Protection of concrete substrates and masonry against water, carbon dioxide, chloride ions, salts, seawater and de-icing salts.

Advantages

- ▲ Non-toxic, approved for use in contact with potable water.
- ▲ Elastomeric, can accommodate static and dynamic cracks.
- ▲ Two-components packaged in a bucket for ease of mixing and application.
- ▲ Fungus and mould resistant.
- ▲ Able to withstand high positive and negative water pressures.
- ▲ Excellent bond to porous and non-porous surfaces.
- ▲ Breathable.
- ▲ Durable, excellent protection against carbon dioxide, chloride ions and water.
- ▲ Suitable for internal and external applications.

Standards

Setseal Ultra complies with the requirements of EN 1504-2 Surface Protection System Principle 1.3, 2.2 and 8.2.

Technical Properties @ 25°C:

Mixed density:	1.85 ± 0.1 g/cm ³
Working time:	45 min
Colour:	Grey or white
Resistance to water pressure (2 mm coating): DIN 1048	> 70 m positive (7 bars) > 50 m negative (5 bars)
Static crack accommodation:	> 0.8 mm
VOC:	< 10 g/ltr (powder) < 20 g/ltr (liquid)
Minimum application temperature:	5°C
Bond strength on normal concrete: ASTM D4541	≥ 1.5 MPa @ 28 days
Bond strength on gypsum boards: ASTM D4541	Gypsum failure
Tensile strength: BS 6319, Part 7 (mortar consistency)	≥ 2 MPa @ 28 days (dry cure)
Elongation at break: ASTM D412 (without reinforcement @ thicknesses > 2 mm)	≥ 15% @ low speed rate

Note: These results were achieved using 2 mm thickness.

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Method of Use

Substrate Preparation

The Substrate should be sound, clean and free from contamination. Remove any traces of curing compounds, laitance, organic growth or any other loose materials.

If honeycombing, damaged or deteriorated concrete exists, the substrate should be repaired using suitable low permeability repair mortars from DCP repair systems before commencing the coating.

Priming

No primer is required. Pre-soak substrates with clean water before the application of Setseal Ultra.

Mixing

To ensure proper mixing, use a mechanically powered mixer or drill fitted with a suitable paddle. Add the 4.5 kg of Setseal Ultra liquid to the container. The 15.5 kg powder is then added slowly to the liquid while mixing continuously with a low speed mixer/ drill (400 - 600 rpm). Mixing time should be continued for 3 minutes until a uniform consistency is obtained.

Application

Setseal Ultra can be applied by brush, roller, trowel or spray machines. The mixed material should be brushed well into the surface. Apply first coat by striking off with the brush in one direction. Care must be taken not to spread the material too thin. When the material begins to drag, do not add any water, but dampen the surface again.

Leave the first coat to cure overnight (or for a minimum of 3 - 5 hours depending on prevailing ambient temperatures) before applying the second coat. Apply the second coat by brush in a similar way but preferably perpendicular to the previous layer to ensure good bond and coverage.

If the first coat is left for more than one day or if it is very dry, pre-soaking with clean water is needed before applying the second coat. To achieve a smooth finish, it is recommended to finish the surface with a trowel immediately after brushing the second coat.

Performance characteristics	EN 1504-2 requirements	Measured value
Permeability to CO ₂ : EN 1062-6	$S_D > 50 \text{ m}$	$S_D > 115 \text{ m}$
Water vapour permeability: ISO 7783-2	Class I: $S_D < 5 \text{ m}$ Class II: $5 \leq S_D \leq 50 \text{ m}$ Class III: $S_D > 50 \text{ m}$	$S_D \leq 0.5 \text{ m}$ (Permeable to water vapour)
Capillary water absorption: EN 1062-3	$< 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$	$\leq 0.025 \text{ kg/m}^2 \cdot \text{h}^{0.5}$
Adhesion strength: EN 1542	Without trafficking $\geq 0.8 \text{ MPa}$ With trafficking $\geq 1.5 \text{ MPa}$	$\geq 1.5 \text{ MPa}$ (Flexible systems with trafficking)

Remarks

- ▲ Setseal Ultra should not be applied to frozen substrates or if ambient temperature is below 5°C or expected to fall below 5°C.
- ▲ The area must not be exposed to moving water during application.
- ▲ Setseal Ultra can be submerged with water after 5 – 7 days of application depending on ambient temperatures and relative humidity.
- ▲ Where cementitious plaster is to be applied over Setseal Ultra, a mix of sand, cement and Cempatch SBR should be sprayed over Setseal B as key. Addition rate of Cempatch SBR should be 10 litre/bag of cement.

Cleaning

All tools should be cleaned immediately after finishing using clean water. Hardened material can be cleaned using proper mechanical means.

Packaging

Setseal Ultra is available in 20 kg buckets containing 15.5 kg powder part and 4.5 kg liquid part.



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Coverage

Approximately 5 - 7 m² per 20 kg when applied in two coats. Coverage depends on the condition of the surface and method of application.

Storage

Setseal Ultra has a shelf life of 12 months from date of manufacture if stored at dry conditions and temperatures between 5°C and 35°C.

Store away from direct sunlight, and protect from freezing.

If these conditions are exceeded, DCP Technical Department should be contacted for advise.

Cautions

Health and Safety

As Setseal Ultra contains Portland cement, it may cause irritation to skin or eyes.

In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advice if necessary.

For further information refer to the Material Safety Data Sheet.

Fire

Setseal Ultra is nonflammable.

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- ▲ Adhesives.
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- ▲ Building products.
- ▲ Structural strengthening.

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Note:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.

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