Setseal B

Elastomeric acrylic cement modified waterproof coating

DESCRIPTION

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

Setseal B provides a hardwearing, seamless, waterproof membrane for potable water retaining structures, tanks, basements, foundations and culverts.

Setseal B shows excellent crack accommodation and is suitable for use on concrete.

APPLICATIONS

- Waterproofing of water retaining structures and reservoirs.
- Waterproofing of basements, roof, and foundations.
- Waterproofing of bathrooms and wet areas.
- Protection of concrete substrates and masonry against carbon dioxide, chloride ions, water and de-icing salts.
- Works as a barrier for rising damp and efflorescence when applied on concrete or masonry walls.

ADVANTAGES

- Non-toxic, approved for use in contact with potable water.
- Elastomeric, can accommodate static and dynamic cracks.
- 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.
- Cost effective, quick and easy brush or spray application.
- Suitable for internal and external applications.

STANDARDS

- Setseal B complies with BS 6920 for using in contact with potable water.
- Setseal B complies with the requirements of EN 1504-2 Surface Protection System Principle 1.3, 2.2 and 8.2.
- Setseal B complies with ASTM C309 for water loss properties (< 0.55 kg/m²) when applied in two coats with total thickness of 2mm.

TECHNICAL PROPERTIES @ 25°C:

Mixed density:	1.85 g/cm³
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
Mixing ratio:	5.1 kg liquid polymer with 17.9 kg powder
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)
Flexural strength: (mortar consistency) ASTM C348	> 8 MPa (dry cure)
Compressive strength: ASTM C109 (mortar consistency)	≥ 15 MPa (dry cure)
Elongation at break: ASTM D412 (without reinforcement @ thicknesses > 2 mm)	≥ 15% @ low speed rate ≥ 5% @ high speed rate
VOC:	< 10 g/ltr (powder) < 20 g/ltr (liquid)

Note: These results were achieved using 2mm thickness.

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METHOD OF USE

SUBSTRATE PREPARATION

The surfaces to be coated should be clean, sound, and free from contamination. Remove any traces of curing compound, mold/formwork release agents, laitance, organic growth, or any other loose materials.

This is best obtained by using high pressure water or light grit blasting. Substrate containing honey combing, damaged or deteriorated concrete should be repaired using suitable repair mortars from DCP repair systems before coating.

Notes:

- *Solvent based primers and coatings like Repcoat primer and Setseal A should be removed mechanically before applying Setseal B.*
- *For Fair-face concrete, it is recommended to clean and prepare the surface by performing slight mechanical roughening, or applying water jetting to enhance the adhesion of Setseal B and prevent peeling.*

PRIMING

No special primer is required, but substrate should be pre-soaked with clean water prior to application of Setseal B.

MIXING

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used. Add the liquid component of Setseal B to a clean container.

The powder component is then added slowly to the liquid while mixing continuously with low speed mixer/drill (400 - 600 rpm). Mixing time should be continued for 3 minutes until a uniform consistency is obtained.

APPLICATION

Setseal B can be applied by brush, trowel, or spray machines. The mixed material should be brushed well into the surface. Strike off with brush in one direction.

Care must be taken not to spread the materials too thin. The first coat should be applied at a wet film thickness of 1 mm. When the material begins to drag, do not add any water, but dampen the surface again.

Performance characteristics	EN 1504-2 requirements	Measured value
Permeability to CO_2: EN 1062-6	S_D > 50 m	S_D > 115 m
Water vapour permeability: ISO 7783-2	Class I: S_D < 5 m Class II: 5 ≤ S_D ≤ 50 m Class III: S_D > 50 m	S_D ≤ 0.5 m (Permeable to water vapour)
Capillary water absorption: EN 1062-3	< 0.1 kg/m².h$^{0.5}$	≤ 0.025 kg/m².h$^{0.5}$
Adhesion strength: EN 1542	Without trafficking ≥ 0.8 MPa With trafficking ≥ 1.5 MPa	≥ 1.5 MPa (Flexible systems with trafficking)

Leave the first coat to cure for a minimum of 4 hours before applying the second coat, depending on ambient temperature, relative humidity and ventilation conditions. If the first coat is left exposed for a long period of time, it is recommended to wash the surface with water before applying the second coat, in order to ensure a dust free surface.

Tiling over the waterproofing could start after a minimum of 4 hours after the application of the second layer, depending on ambient temperature, relative humidity and ventilation conditions.

For brush application, the second coat should be applied in a perpendicular direction to the previous layer to ensure good bond and coverage.

To achieve a smooth finish, it is recommended to finish the surface with a trowel immediately after brushing the second coat. The total dry film thickness for both coats should be 2 mm.

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REMARKS

- Setseal B 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 B typically reaches a shore A hardness of over 80 after 24 hours from the application of the second coat(at 23 ± 2°C and relative humidity of 50 ± 5%) which allows for the water ponding test to start at this period. However, at temperatures below 21°C or relative humidity higher than 55%, it is recommended to wait for a period of 48 hours after the application of the second coat in order to conduct the water ponding test.
- Where cementitious plaster is to be applied over Setseal B, 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.
- Ensure proper ventilation during waterproofing system application and curing for optimal results.

CLEANING

All tools should be cleaned immediately after finishing using clean water. Hardened materials should be cleaned mechanically.

PACKAGING

Setseal B is available as 23 kg packs.

COVERAGE

Approximately 12 - 13 m^2 per 23 kg for one coat @ 1 mm thickness, depending on the condition of the surface and method of application.

STORAGE

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

If these conditions are exceeded, contact DCP Technical Department for advice.

CAUTIONS

HEALTH AND SAFETY

As Setseal B contains Portland cement, Setseal B 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 advise if necessary.

For further information refer to the Material Safety Data Sheet.

FIRE

Setseal B is nonflammable.

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