

# Setseal 400FLX

Highly flexible acrylic cement modified one component waterproof coating



## Description

Setseal 400FLX is a one components; flexible polymer modified cementitious waterproof coating suitable for internal and external applications with outstanding crack bridging characteristic.

Setseal 400FLX provides a hardwearing, seamless, waterproof membrane for potable water retaining structures, tanks, basements, foundations and culverts.

## Applications

- ▲ Waterproofing for water retaining structures and reservoirs.
- ▲ Waterproofing of basements, roofs, and foundations.
- ▲ Waterproofing of bathrooms and wet areas.
- ▲ Protection of concrete substrates and masonry against carbon dioxide, chloride ions, water and de-icing salts.

## Advantages

- ▲ Excellent crack bridging characteristic.
- ▲ Single component, need only water additions.
- ▲ Non-toxic, approved for use in contact with potable water.
- ▲ Fungus and mold resistance.
- ▲ Excellent bond to porous and non-porous surfaces.
- ▲ Breathable.
- ▲ Durable, excellent protection against carbon dioxide, chloride ions and water.
- ▲ Cost effective, quick and easy application.
- ▲ Suitable for internal and external applications.

## Standards

Setseal 400FLX complies with EN 14891, Type CM.

## Method of Use

### Substrate Preparation

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

## Technical Properties @ 25°C:

Mixed density:	1.2 ± 0.1 g/cm <sup>3</sup>
Working time:	1 hr
Colour:	Grey
Initial setting time:	4 - 5 hr
Application temperature:	5 to 45°C
Application thickness:	2 mm (with two coats)
Elongation at break: ASTM D412	≥ 20% @ 28 days, 2 mm (@ 5 mm/ min speed rate)
Tensile strength: ASTM D412	≥ 1.0 MPa @ 28 days, 2 mm (@ 5 mm/ min speed rate)
Compressive strength: ASTM C109	≥ 8.0 MPa @ 28 days (Mortar consistency)
Flexural strength: ASTM C348	≥ 3.0 MPa @ 28 days (Mortar consistency)
Adhesion strength on C35 concrete: ASTM D4541	≥ 2.0 MPa @ 28 days
Water retention: ASTM C309	Pass @ 2 mm
Water permeability: DIN 1048	Nil @ 5 bars

Properties	EN 14891 requirement for Type CM	Measured value
Tensile adhesion strength:*	≥ 0.5 N/mm <sup>2</sup>	Pass
Tensile adhesion strength after water contact:*	≥ 0.5 N/mm <sup>2</sup>	Pass
Tensile adhesion strength after heat aging:*	≥ 0.5 N/mm <sup>2</sup>	Pass
Tensile adhesion strength after freeze-thaw cycles:*	≥ 0.5 N/mm <sup>2</sup>	Pass

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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.

## Priming

No special primer is required, but substrate should be pre-soaked with clean water prior to application of Setseal 400FLX.

## Mixing

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used. Add the 5.7 - 6.1 litre water to a clean container. The powder component is then added slowly to the water 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 400FLX can be applied by brush or roller. 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 1mm. When the material begins to drag, do not add any water, but dampen the surface again.

A minimum of 3 - 5 hours, depending on the prevailing ambient temperature, should be given for the first coat to cure before applying the second coat. If the first coat is fully dried, pre-soaking is needed before applying the second coat.

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.

Properties	EN 14891 requirement for Type CM	Measured value
Tensile adhesion strength after contact with lime water:*	≥ 0.5 N/mm <sup>2</sup>	Pass
Waterproofing:	No penetration and ≤ 20 g water gain	Pass
Crack bridging under standard condition:	≥ 0.75 mm	Pass Up to 2 mm

*If C2 tile adhesive (as per ISO 13007) is used in conjunction with Setseal 400FLX, results greater than 1.0 N/mm<sup>2</sup> are anticipated.*

## Remarks

- ▲ Setseal 400FLX 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 400FLX 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 400FLX, a mix of sand, cement and Cempatch SBR should be sprayed over Setseal 400FLX 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 materials should be cleaned mechanically.



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## Packaging

Setseal 400FLX is available in 15 kg bags.

## Coverage

Approximately 17 - 17.5 m<sup>2</sup>/15 kg for one coat @ 1 mm thickness.

## Storage

Setseal 400FLX has a shelf life of 12 months from date of manufacture if stored at temperatures range between 5°C and 40°C.

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

## Cautions

### Health and Safety

As Setseal 400FLX contains Portland cement, Setseal 400FLX 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 400FLX is nonflammable.

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