

# Cemflow Base S

Cement based self leveling industrial surface system



## DESCRIPTION

Cemflow Base S is designed as an industrial grade floor topping for upgrading and renovating new and existing internal floors.

Cemflow Base S is supplied as a pre-blended dry powder designed for application between 5 mm to 50 mm (in one application) to provide a finished sound floor.

## APPLICATIONS

It is suitable for use in a wide range of industrial and commercial applications such as:

- » Warehouses.
- » Food processing plants.
- » Industrial floors.
- » Car parks.
- » Underfloor heating systems.

## ADVANTAGES

- » Self-smoothing.
- » Dimensionally stable.
- » Fast drying.
- » Can be applied by pump.
- » Cemflow Base S can be pumped to cover an area of 2000 m<sup>2</sup> per day. Alternatively a coverage of 600m<sup>2</sup> per day can be achieved when hand applied, depending on manpower, thickness applied and equipment used.

## STANDARDS

Cemflow Base S complies with EN 13813, Class CT-C35-F5-AR1.

## METHOD OF USE

### SUBSTRATE PREPARATION

Concrete substrates should be fully cured and achieve a minimum compressive strength of 25 N/mm<sup>2</sup> and a minimum pull-off strength of 1.5 N/mm<sup>2</sup>.

The concrete substrate should be below 75% RH and have less than 4% moisture content. Alternatively, Strongcoat DPM should be applied according to the priming section.

## TECHNICAL PROPERTIES @ 25°C. W/P: 0.18:

Flow properties using 35 cc flow ring: ISO 554	Initial ≥ 120 mm After 15 min ≥ 110 mm
Workability:	15 - 20 min
Vicat setting time:	2 hr
Foot traffic:	24 hr
Light traffic:	48 hr
*Compressive strength: EN 13892-2	≥ 20 MPa @ 7 days ≥ 35 MPa @ 28 days
Flexural strength: EN 13892-2	≥ 5 MPa @ 7 days
Maximum wear depth: BS EN 13892-4	0.1 mm
Maximum application surrounding temperature:	35°C
Maximum mixed material temperature:	32°C
Shrinkage (μ/m): ASTM C490-00a	< 400 microns @ 28 days
Application thickness:	5 – 50 mm
Bond strength to C25/30 concrete: EN 1542	≥ 2 MPa @ 28 days (concrete failure)
VOC: ASTM D2369	< 5 g/ltr

*\*Note: dry cure for compressive and flexural strengths.*

## SURFACE PREPARATION

Concrete surfaces must be degreased using degreasing products, torching or any other suitable method which assures the surface is free from any oil traces.

Surfaces should be sound and with no irregularities as they can affect the finish of the applied product.

Concrete surfaces are to be mechanically prepared to remove laitance and achieve a flat surface, grit blasting or surface profiling equipment are preferred. Acid etching can be used after consulting with DCP's Technical Department.

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Surface defects such as voids and blowholes should be repaired before application. Consult DCP's Technical Department for the best repair material.

Surfaces must be free of any dust or loose particles before product application. Use suitable methods like vacuuming or sweeping.

If possible, apply the product on a small test area before actual application to check for any problems with the surface preparation.

## PRIMING

Priming is done to seal the substrate in order to prevent pin holing caused by the release of air from the substrate. The following priming options are available:

### Cemflow Primer

For application onto sand/cement screeds, concrete and other porous substrates, first seal the prepared surface by applying one coat of Cemflow Primer diluted with 3 parts potable water and allow to dry.

Prime the sealed surface by applying a second coat of Cemflow Primer diluted with 3 parts potable water and brush well into the surface. The primer must be allowed to dry before the application of Cemflow Base S.

### Strongcoat Primer

For impervious surfaces, apply one coat of Strongcoat Primer and whilst still tacky fully blind with Antislip Aggregate #2 at approximately 3 kg/m<sup>2</sup> until the surface is covered and no resin spots remain. Allow to dry fully overnight and remove excess aggregate before applying Cemflow Base S.

For porous substrates, apply one coat of Strongcoat Primer and allow to cure. Apply second coat and whilst still tacky fully blind with Antislip Aggregate #2 in the manner mentioned above.

Allow to dry fully overnight and remove excess aggregate before applying Cemflow Base S.

## Strongcoat DPM

For surfaces with RH between 75 and 85%, prime with 1 coat of Strongcoat DPM and allow to dry prior to application of Strongcoat Primer.

For surfaces with RH greater than 86%, prime with 2 coats of Strongcoat DPM and allow the second coat to dry before priming with Strongcoat Primer.

After Strongcoat DPM has been applied and left to cure, apply Strongcoat Primer and whilst it is still tacky fully blind with Antislip Aggregate #2 at approximately 3 kg/m<sup>2</sup>, until the surface is covered and no resin spots remain. Allow to dry fully overnight and remove excess aggregate before applying Cemflow Base S.

## MIXING

### Hand Application:

Use a power-whisk fitted in a heavy-duty slow speed electric drill. Mix in the proportion of 25 kg of powder to 4.5 – 4.8 litre of potable water.

Pour the water into a suitably sized bucket and gradually add the powder while stirring, until a smooth, lump free consistency is achieved.

Total mixing time must not be less than 5 minutes.

### Pump Application:

Mix the powder and water according to the method recommended by the pump manufacturers. In the case of pumps having a continuous water feed adjust the rate of water flow until the mix is a smooth fluid, uniform grey liquid with no surface separation, producing a flow of approximately 130 mm using a 50 cc flow ring.

To avoid separation, applications greater than 15 mm require less water and therefore a reduced flow.

## APPLICATION

Pour or pump the mixed material onto the prepared surface and allow to attain a smooth finish. The use of a spiked roller will help eliminate entrapped air and smooth out flow lines. Apply at a thickness between of 5 - 50 mm in one pass.

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It is always better to work in manageable sections of approximately 20 m<sup>2</sup>. It is recommended to seal Cemflow Base S with suitable epoxy resin or solvent based resin sealer, especially if water may come into direct contact with the cured Cemflow Base S. Where materials are to be applied over the surface of the hardened Cemflow Base S, it is good practice to SHOT BLASTING the surface prior to carrying out subsequent treatments.

## CURING

Curing is not required in normal conditions, but in harsh climatic conditions like direct sunlight, flow of wind, elevated temperatures, etc; freshly hardened concrete surfaces should be covered with polyethylene sheets.

## PRECAUTIONS

- » Don't place when the substrate temperature is below 10°C or when the ambient temperature is 10°C and falling.
- » Protect from frost.
- » Don't exceed the recommended water content and only use potable cool water. Better to have the mixed fresh material temperature < 30°C.
- » This product is not recommended for external use or situations where water may come into direct contact with the cured material.
- » Not recommended to work with the product when surrounding temperature > 35°C.
- » The material should not be used on floors where rising damp is valid, unless a suitable primer is used.

## CLEANING

Tools and equipment can be cleaned with water immediately after use.

## PACKAGING

Cemflow Base S is available in 25 kg bags.  
Cemflow Primer is available in 5 and 25 litre pails.

## COVERAGE

Cemflow Base S: 1.36 m<sup>2</sup> @ 10 mm thickness for 25 kg bag mixed with 4.5 litre of clean water.

Cemflow Primer when diluted 3 parts potable water to one part primer:  
30 m<sup>2</sup>/5 litre.  
150 m<sup>2</sup>/25 litre.

## STORAGE

Store in a dry area out of frost at temperatures between 10°C and 30°C.

## SHELF LIFE

Cemflow Base S has a shelf life of 9 months from date of manufacture if stored in proper conditions.

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

## CAUTIONS

### HEALTH AND SAFETY

Cemflow Base S 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

Cemflow Base S is nonflammable.

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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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05-0032-A-2022