Cemflow GPU

Self smoothing floor leveling underlayment

DESCRIPTION

Cemflow GPU is supplied as a pre-blended dry powder designed for application between 1 mm to 10 mm application.

APPLICATIONS

Cemflow GPU is designed as a self smoothing suitable for use as a cementitious underlay for many types of floor finishes such as Vinyl sheeting, carpeting, rubber sheet and tiles.

ADVANTAGES

- Single component, requires only addition of water.
- Good setting properties.
- Fast laying, up to 500 m² per day.
- Excellent adhesion.

STANDARDS

Cemflow GPU complies with EN 13813, Class CT-C35-F7.

METHOD OF USE

SUBSTRATE PREPARATION

Concrete substrates should be fully cured and achieve a minimum compressive strength of 25 MPa and a minimum pull-off strength of 1.5 MPa. 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.

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 Technical Department.

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

TECHNICAL PROPERTIES @ 25°C. W/P = 0.20:	
Maximum grain size:	0.5 mm
Flow properties using 35 cc flow ring:	Initial ≥ 130 mm After 15 min ≥ 115 mm
Workability:	15 min
Foot traffic:	24 hr
*Compressive strength: ASTM C109/109M-02 BS EN 13892-2	> 20 MPa @ 7 days > 35 MPa @ 28 days
Flexural strength: BS EN 13892-2	≥ 4 MPa @ 7 days ≥ 7 MPa @ 28 days
Maximum application surrounding temperature:	35°C
Maximum mixed material temperature:	32°C
Shrinkage (µm/m): ASTM C490-00a	400 @ 28 days
Application thickness:	1 – 10 mm
Bond strength to concrete: ASTM C1583	> 1.5 MPa @ 28 days
VOC: ASTM D2369	< 5 g/ltr

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

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:

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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 GPU.

Strongcoat Primer
For impervious surfaces, apply one coat of Strongcoat Primer and whilst still tacky fully blind with Antislip Aggregate #2 or #3 (depending on the final application thickness) at approximately 3 kg/m² until the surface is covered and no resin spots remain. Allow to dry fully overnight and remove excess aggregate before applying Cemflow GPU.

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 or #3 (depending on the final application thickness) in the manner mentioned above.

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

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/m², until the surface is covered and no resin spots remain. Allow to dry fully overnight and remove excess aggregate before applying Cemflow GPU.

MIXING

Use a power-whisk fitted in a heavy-duty slow speed electric drill. Mix in the proportion of 25 kg of powder to 5 - 5.25 litre of potable water. Slowly add the powder while continuously mixing is taking place.

Continue mixing until a smooth, lumps free consistency is achieved. Total mixing time must not be less than 3 minutes.

Ensure that sufficient labor is available to enable continuous mixing and pouring. Place the Cemflow GPU within 2 minutes of completion of mixing.

APPLICATION

Pour or pump the mixed material onto the prepared surface spread with trowel and allow to level, and allow to attain a smooth finish. The use of a spiked roller will help eliminate entrapped air and smooth out flow lines.

Do not over roll. Apply at a thickness between of 1 - 10 mm in one pass only. To reduce the formation of seam lines, freshly mixed Cemflow GPU should be placed within 6 minutes of the previous adjacent batch being poured. Best results are achieved when the pouring and leveling are a continuous process. It is always better to work in manageable sections of approximately 20 m².

Note: If the mixing batch stiffens, it should be discarded, do not remix it with water.

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 cured with damp Hessian or to 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 cool potable water. Better to have the mixed fresh material at 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 the surrounding temperature > 35°C.
- The material should not be used on floors where rising damp is valid, unless a suitable primer is used.

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Notes:
- *Cool water is advised for mixing (temperature around 20°C or low).*
- *Freshly laid Cemflow GPU should be protected from direct sunlight and strong drying winds until the material is hard.*
- *Cemflow GPU should not be used on new concrete low than 14 days old.*
- *Application should not be done if the temperature of the substrate is below 5°C.*
- *The material should not be applied on floors known to have problems from rising damp.*

CLEANING

All tools should be cleaned immediately after finishing with water.

PACKAGING

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

COVERAGE

Cemflow GPU: 2.9 m^2 @ 5 mm thickness for 25 kg bag mixed with 5 litre of clean water.

Cemflow Primer when diluted 4 parts potable water to one part primer:
- 50 m^2/5 litre.
- 250 m^2/25 litre.

When diluted 3 parts potable water to one part primer:
- 40 m^2/5 litre.
- 200 m^2/25 litre.

STORAGE

Cemflow GPU has a shelf life of 9 months from date of manufacture if stored at temperatures between 2°C and 30°C in original unopened bags.

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

CAUTIONS

HEALTH AND SAFETY

Cemflow GPU 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

Cemflow GPU is nonflammable.

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