# Cemflow Sealer

Water-based, polyurethane concrete and screed sealer

## DESCRIPTION

Cemflow Sealer is a clear, two-component, water-dispersed polyurethane matt sealer designed to protect and seal Cemflow screeds and concrete surfaces, providing an abrasion resistant, hygienic and durable floor finish. The application of Cemflow Sealer helps to protect the floor surface and ease maintenance by reducing the adhesion of dirt and other debris, whilst eliminating dusting. Cemflow Sealer is available in satin and matt finishes.

Cemflow Sealer can also be used as sealer over existing epoxy/polyurethane flooring systems, to improve slip and abrasion resistance, as well as provide an anti-stain matt finish. Cemflow Sealer cures by a chemical crosslinking reaction, providing durability, toughness and chemical resistance that far exceeds that of one-component acrylic or polyurethane sealers.

## APPLICATIONS

Cemflow Sealer is designed to seal a variety of Cemflow, Strongcoat and Griptop flooring systems, as well as screeds in the following:

- Retail spaces such as stores and showrooms.
- Health care facilities such as hospitals and clinics.
- Business facilities such as offices and lobbies.
- Museums, theatres and shopping malls.
- Educational premises such as universities, schools and colleges.
- Industrial facilities such as warehouses, production, maintenance and assembly areas.
- General food processing and manufacturing plants.

## ADVANTAGES

- Excellent UV stability, non-yellowing.
- Provides a slip resistant matt finish.
- Extremely easy to clean and maintain.
- Low VOC content, and low odour.
- Resistant to many of the chemicals commonly found in industrial applications.
- Water based, environmentally friendly.
- Excellent abrasion and scratch resistance.
- High bond strength to porous and non-porous substrates.
- Excellent water and stain resistance, prevents penetration of oils and liquids.
- Excellent resistance to dust and dirt pick up.
- Available in satin and matte finishes.

## TECHNICAL PROPERTIES:

| | |
|---|---|
| Mixed density: | 1.05 ± 0.05 g/ml |
| Solid content: | 44 ± 1% |
| Pot life: | 4 hr @ 25°C<br>3 hr @ 35°C |
| Tack free time @ 25°C<br>Absorbent surfaces<br>Non-absorbent surfaces | <br>20 – 30 min<br>30 – 40 min |
| Light foot traffic time: | After 24 hr |
| Full cure: | After 3 days @ 25°C |
| Bond strength:<br>ASTM D4541<br>EN 24624 | ≥ 2.5 N/mm²<br>(concrete failure) |
| UV Resistance:<br>ASTM G53<br>8 hr UV light @ 60°C, 4 hr condensation @ 47°C | Excellent<br>Pass QUV accelerated weathering 2000 hr |
| Glossiness @ 60°C: | < 3.0<br>(Matt) |
| Abrasion resistance:<br>(1000 g, 1000 cycle)<br>ASTM D4060<br>EN ISO 1570-1, weight loss<br>CS17 wheel | < 60 milligram |
| Slip resistance:<br>BS 7976, Slider 96 | Dry 65<br>Wet 41 |
| VOC: | < 10 g/ltr<br>(comply with LEED) |

## METHOD OF USE

## SUBSTRATE PREPARATION

*Absorbent surfaces (cementitious screeds)*
Surfaces to be sealed must be clean, dry and free from dust, debris or other contaminants. Cemflow Sealer can be used to seal Cemflow screeds, make sure to wait 24 hours after the application of the screed, dependent on temperature and humidity conditions.

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*Old or existing non-absorbent surfaces*
These include existing epoxy or polyurethane coatings, and tiles such as glazed ceramic or porcelain. Cemflow Sealer can be used to seal Cemflow Topping and Cemflow Topping Pigmented as soon as 1 hour after the screed has set, depending on temperature and humidity conditions.

The existing surface must be clean, dry and free from dust, debris or other contaminants. Make sure the existing flooring system is intact and properly bonded to the substrate before the application of Cemflow Sealer. It is recommended to solvent wipe the surface clean using acetone to improve performance.

## MIXING

For best results, mix component A with component B for a minimum of 2 minutes using a high speed mixer, such as a drill with paddle attachment. Once mixed leave to rest for 5 minutes, and then remix to consistency at a slow speed.

## APPLICATION

Cemflow Sealer may be applied using roller (short nap or foam roller) or airless spray to completely cover and seal the surface. Most consistent finishes are obtained by spray.

For cement-based surfaces and absorbent materials, apply a preliminary coat mixed at a ratio of 1 part Cemflow Sealer to 3 parts water. This should be done before applying the Cemflow Sealer in its undiluted form.

For non-absorbent substrates such as glazed ceramic and porcelain tiles, existing epoxy or polyurethane coatings, Cemflow Sealer should be used neat without dilution, applied in 1 or 2 coats at a rate of approximately 10 $m^2$ per litre.

When using rollers, wet them out when starting application, taking into consideration the amount of material the roller will absorb. The roller will absorb approximately 250 - 400 ml of the material. Start coating the floor by cutting in the edges with a brush and/or small roller.

To minimise roller marking when the finish is applied by this method, pour neat Cemflow Sealer into a roller tray and apply it evenly in the same direction over the surface. The material is then cross rolled in the opposite direction. Do not overlap more than 50 mm onto the prior pass.

When applying a second coat of Cemflow Sealer, it is recommended that this be applied at an angle of 90 degrees to the first coat to ensure complete coverage. Under typical conditions, a second coat can be applied approximately 4 - 6 hours after the first.

**OCCASSIONAL SPILLAGE**

**Chemical Resistance after full cure (3 days @ 25°C), ASTM D1308 (Spot - test @ 24 hr)**

| | |
|---|---|
| **Organic Acids** | |
| Lactic Acid 8% | R |
| Balsamic Vinegar 6% | R |
| Acetic Acid 10% | R |
| **Inorganic Bases** | |
| Sodium Hydroxide 50% | R |
| **Aqueous Solutions** | |
| Sodium Chloride 3.5% | R |
| Tap Water | R |
| **Household Chemicals** | |
| Ketchup | R |
| Mustard | RS |
| Mayonnaise | R |
| Olive Oil | R |
| Coffee | R |
| Floor Cleaner | R |
| Ethanol Oil | R |
| **Oils & Fuels** | |
| Engine Oil | R |
| Diesel | R |
| Jet Fuel | R |
| **Inorganic Acids** | |
| Sulfuric Acid 10% | R |
| Hydrochloric Acid 10% | R |

*R: Resistant*
*RS: Resistant with slight discoloration*
*SS: Slight softening*

## SLIP RESISTANCE

Cemflow Sealer has excellent slip resistance in dry conditions, however when wet, the risk for slip is increased. Spillages should be cleaned up as soon as possible. If the surface is likely to be used in a wet environment and a slip resistant finish is required please contact our Technical Services Department for more details.

*Note: Any spillages of liquids must be cleaned up quickly with wet floor signage to avoid slips.*

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## LIMITATIONS

- Do not pour Cemflow Sealer directly onto the surface of Cemflow Cementitious Flooring Range.
- Cemflow Sealer has no visible end of pot life. It is critical that you keep track of the time and temperature to ensure that you are working within the pot life. Typically, it is best to apply the product within 4 hours of mixing (at 25°C ambient temperature). If a "wet" edge is maintained throughout the application, a seamless finish can be created.
- After application, the surface should be protected from direct contact with water for at least 24 hours.
- Surface and ambient temperature during coating applications should be between 10°C and 35°C.
- Material temperatures should be at least 10°C and rising. It is recommended to precondition material for at least 24 hours at temperatures between 15 and 25°C.
- Low temperatures and/or high humidity will increase curing time.
- Avoid condensation by ensuring that the substrate temperature is at least 3°C above the measured dew point. Keep in mind that the substrate temperature may be lower than the ambient temperature.
- The use of Cemflow Sealer as a UV resistant top coat may not prevent discolouration of underlying coatings.
- Do not puddle or apply at excessive thicknesses as this will extend drying times and may cause the product to cure to a cloudy white finish.

## CURING

Cemflow Sealer should be tack-free in approximately 20 - 40 min at 25°C and ready to accept light foot traffic after 24 hours. In heavy-duty applications, the floor should not be used after 3 days to allow full drying and curing of the sealer.

## CLEANING

Once mixing, application and finishing are complete, tools can be cleaned with warm soapy water.

## PACKAGING

Cemflow Sealer is available in 5 kg kits.

## COVERAGE

On absorbent surfaces, Cemflow Sealer should be diluted 1:3 with water and applied as a primer at a rate of 10 m² per litre of diluted material. Subsequent coats should be applied neat.

The typical coverage of subsequent coats is 10 m² per litre of neat material.

*Note: Coverage rates are approximate and will vary according to amount of overcoating during application and substrate porosity. Each subsequent coat will generally require less material.*

## STORAGE

Cemflow Sealer has a shelf life of 6 months from date of manufacture if stored in dry conditions at temperatures between 5 and 30°C, in original unopened containers and under good conditions.

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

## CAUTIONS

## HEALTH AND SAFETY

Care should be taken during use and storage to avoid contact with skin, eyes and mouth.
Wear suitable protective clothing, gloves and eye/face protection.

Should accidental skin contact occur, remove immediately with plenty of clean water. If swallowed, seek medical attention immediately - do not induce vomiting.

For further information refer to the Material Safety Data Sheet.

## FIRE

Cemflow Sealer is water based and nonflammable.

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