enviro cemflex

Cementitious Waterproofing Treatment

envirosystems

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Description

Cemflex is a cement based 2 part polymer modified waterproof slurry coating. It is applied to concrete, masonry and mortar to prevent water infiltration.

Advantages

- Pre-batched components – mixes and applies easily
- Increased salt and frost resistance
- Good adhesion to sound, prepared substrates
- Slurry or trowellable consistency
- Permeable to water vapour, allows substrate to breathe
- Non-corrosive to steal or iron
- Protects against concrete carbonation and water penetration
- Non-toxic – suitable for contact with drinking water
- Effective against, both positive or negative water pressure

Uses

Cemflex is suitable for the following applications:

- Internal & external basement walls
- Fine "hairline" cracks in concrete
- Water tanks, swimming pools etc
- Retaining walls
- Bathroom floors
- RC gutters and planter box
- Protection of concrete structures against the effects of carbon dioxide, de-icing salts and freeze thaw
- General Interior and exterior waterproofing
- Seawalls
- Terraces and balconies
- Potable concrete water tanks

Physical Properties

Form / Colour
- Part A — White Liquid
- Part B — Grey or white powder
- Part A+B — Grey slurry

Mix Ratio Part A: Part B 1:4 W/W

Density A+B (Mixed) 1.9-2.0kg per litre (Ratio 1A: 4B)

Adhesive strength 1.0 to 1.5 N/mm² (on concrete)

Pot life 30min at 25°C

Technical data

Coefficient of Permeability, K(m/sec – under 3kg/cm² of water pressure)

- Mortar (Grade 20N/mm²) $6.49*10^{-11}$
- Mortar coated with Cemflex $1.27*10^{-12}$
- Comparative ratio 0.02

Typical results

- E-modulus(Static) ≈8.400 N/mm²
- CO_2 Diffusion Resistance 37,015µ
- Water absorption A (kg per m², $h^{0.5}$) Concrete 0.66 , Concrete Coated with Cemflex 0.035
- Water vapour resistance (Sd in m) Concrete 1.7 , Concrete Coated with Cemflex 2.06

Application Directions

Surface Preparation

Concrete, mortar and masonry surfaces must be clean, free from grease, oil, laitance, loosely adhering particles and sharp edges. Absorbent surfaces have to be thoroughly saturated with water prior to application or first coat of Cemflex. However, no loose standing water should be on the surface before application. All intersections of horizontal and vertical surfaces should be profiled with a mortar fillet of 25mm x 25mm.

Note: Cemflex will not bond to surfaces that have been treated previously with water repellent.

Mixing

Under normal circumstances, when the full quantities of both parts are mixed together, a slurry consistency will result. The consistency of the mix can be altered by reducing the amount of Part A (liquid) to be used. For trowel application, use only 90% of Part A (approximately 4.5kg). Do not add water or any other mixtures and compounds. Mix in clean container by slowly adding the powder component (Part B) to the liquid component (Part A) and stirring with a low speed mixer (500rpm). Use within 30 minutes.

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Application

Whilst the substrate is still damp from saturation, apply the first coat. Leave to harden for approximately 4-8 hours at temperatures above 20ºC before applying the second coat. For slurry consistency, apply with a hard plastic bristled brush or broom. For floor applications, to avoid risk or damage to the first coat, it is recommended that the second coat be applied before 24 hours. If the second coat is applied 12 hours or later, the first coat shall be slightly pre wetted, preferably by using a fine spray. After the second coat has been applied, better finishing can be achieved by rubbing down with a soft, dry sponge. Cemflex can also be applied by trowel or by spraying.

Overcoating

For overcoating with cementitious material, allow the second coat to harden at least 3 days prior to overcoating. For overcoating with non cementitious materials please refer to our Technical Service Department.

Curing

Generally not required but precaution should be taken for application done directly under sunlight and in windy conditions. It should also be protected from direct rain for at least 4 hours.

Estimating Data (Theoretical)

- Bathrooms, terraces and balconies is 1kg per m² per coat, as protective coating is 2kg per m² per coat.
- Coating <1meter waterhead is 1.5kg per m² per coat, >1meter waterhead is 2.0kg per m² per coat

Note: Cemflex must be applied in a minimum of 2 coats (3 coats may be required in areas of extremely high infiltration)

Packaging

25kg kits (Part A: 5kg containers and Part B: 20kg bags)

Shelf life

12 months from the date of production when stored in original unopened packaging in a dry cool place.

Important Notes

- Minimum ambient and substrate temperature is 8ºC - Optimum application temperature should be from 8 ºC to 32 ºC
- Never apply more than 4kg per m² of Cemflex in one single layer.
- Apply only to clean, sound substrates – surfaces should be well dampened but free of surface water and leaks.
- Cemflex is not a decorative treatment and may display signs of "blooming" in damp weather conditions. This does not affect the quality of the coating in any way. Where a decorative finish is required, overpaint Cemflex with any approved Enviro protective and decorative coating.
- For potable water application, wash the surface with water before use.

Cleaning

Clean tools and equipment immediately with water. Hardened material can only be removed mechanically.

Safety

Enviro Cemflex is not classified as dangerous and is not toxic but precautions should be taken while using the product. Avoid prolonged skin contact. Wear protective clothing, gloves, goggles, mask etc. In the event of contamination was thoroughly with water. If the eyes or mouth are affected, wash with clean water immediately and seek medical attention. For more information, please refer to our Materials Safety Data Sheet.

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