

# Polyflex Combo

## Acrylic modified elastomeric cementitious waterproofing and protective coating for concrete

Two component, acrylic cementitious coating which cures to form a tough and flexible coating having excellent waterproofing properties.



### CHARACTERISTICS

- ▶ Good flexibility
- ▶ Good adhesion to both, porous and non porous surfaces
- ▶ Good mechanical properties
- ▶ Good abrasion resistance. Suitable for pedestrian traffic
- ▶ High durability to long term weathering effect and UV exposure
- ▶ Non toxic, therefore suitable for potable water applications
- ▶ Resistant to carbon dioxide and chloride ion diffusion
- ▶ Can be applied to 24 hours old concrete, there by giving immediate protection to the concrete.
- ▶ Allows the substrate to breathe



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### DESCRIPTION

Polyflex Combo is a two part acrylic modified cementitious coating for protecting concrete structures against water, vapor, ingress of chloride ions, attacks of acidic gases and alkalis. It cures to form a tough flexible coating having excellent waterproofing properties. Polyflex Combo is a blend of cement, selected fillers, polymers and graded silica sand which is in the powder form. The liquid part contains acrylic co-polymers and wetting agents.

### FIELDS OF APPLICATION

- internal and external water proofing of potable water reservoirs
- good anti carbonation protective coating to exposed concrete structures
- protective coating on structures exposed to sea water
- sealing light aerated blocks, pre-cast joints
- waterproof coating on roofs, domes, tunnels, swimming pools, lift wells, spillways, surge shafts, pre-cast slabs and other wet areas
- specially designed for permanent ponding

### ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content).

### APPLICATION INSTRUCTIONS

#### Surface Preparation

The surface must be structurally sound and free of oil and grease, dust and other contaminants which will affect the bonding. Any structural cracks or potholes shall be repaired with a suitable repair mortar from the Polycrete\* range of repair mortars. Light mechanical grinding or high pressure water jet cleaning of the concrete surface can be done to remove any contaminants from the surface. The surface to be treated should be presaturated with water prior to application. However, remove any standing water from the concrete surface just before applying the coating.

#### Mixing

Polyflex Combo is supplied in two pre measured parts which just requires on site mixing. Do not mix more material than that can be used within the pot life. Part mixing can be carried out by mixing only exact half the quantity supplied on both components. Pour the liquid (2 cans) into a suitable container and slowly add the powder to the liquid. Mix the contents using a slow speed drill (300- 400rpm) fitted to a proprietary paddle mixer until a lump free creamy consistency is obtained. **DO NOT ADD WATER TO DILUTE THE MATERIAL AT ANY STAGE**

#### Application

It is recommended to apply Polyflex Combo in two coats to provide a minimum thickness of 2mm. Each coat shall

be applied @1.4 kg/m<sup>2</sup> which will give a dry film thickness of 1mm. The coating can be applied with a stiff brush or an airless spray of nozzle size of 3-4mm and a pressure of 6-7 bars. After the application of the first coat and whilst it is still wet, embed a CL 252 mesh in all the corners and other joints for added reinforcement. The second coat shall be applied after the first coat dries. for protection against carbonation and alkali attacks, the coating can be applied in minimum 1mm thickness.

### Curing

The coating shall be cured immediately after it dries by wet hessian cloth or mist spraying for a minimum period of 72 hours. The coating will achieve its full mechanical properties within 7 days at 25°C & 50% RH.

### Cleaning

Clean all tools immediately with water after use. Hardened materials can be removed mechanically only.

### STORAGE & SHELF LIFE

Store the material in a covered and shaded area. Protect from sunlight, UV and extreme temperatures. In tropical conditions the product shall be stored in air-conditioned environments. The shelf life is 12 months when stored as per recommendation and in un-opened conditions. Prolonged exposure to heat and humidity will result deterioration of the quality of the product and reduce its shelf life.

### HEALTH AND SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as rubber gloves and safety goggles should be worn. Treat any splashes to skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting but call for medical assistance immediately

### SUPPLY

Polyflex Combo	20kg Kit (Part A - 10kg bag) (Part B - 10kg [2x5kg])
Polycrete range	25kg bag
CL 252	100mm x 50m

### TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Color	Beige	-
Mixed density, [g/cc]	1.4±0.05	ASTM D 1475
Pot life, [min]	45	
Tensile strength, [N/mm <sup>2</sup> ]	3.5	ASTM D 412
Elongation, [%]	>250	ASTM D 412
Abrasion resistance, [gms]	<50	ASTM D 4060
Toxicity	Non-toxic	BS 6920
Hydrostatic pressure @5 bar [50m]	No leakage	BS 12390 [Part 8]
Hydrostatic negative pressure @3 bar [30m]	No leakage	BS 12390 [Part 8]
Crack bridging ability, [mm]	>1	ASTM C 836
Adhesion to concrete, [N/mm <sup>2</sup> ]	>0.5	ASTM D 4541
Chemical resistance	pH 2.5-11.5	ASTM D 543
Drying time, [hours]	6-8	-
full cure, [days]	7	-
Application temperature, [°C]	5 to 45	-
Service temperature, [°C]	-5 to 80	-
VOC, [g/L]	<50	ASTM D 3960 / D 2369

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

