

## **FLEXIBLE CEMENTITIOUS WATERPROOFER**

- **Resistant to water aggressive to concrete**
- **Applicable by mortar gun**

- **Suitable for areas of potential cracking**
- **Highly flexible cement**

### **PRODUCT DESCRIPTION:**

Pro-Struct 546 Flexible Cementitious Waterproofer is a two-component polymer modified cementitious surface treatment. It consists of Pro-Struct 875 Cementitious Waterproofer and Pro-Struct 546 Flexible Cementitious Liquid.

### **AREAS OF APPLICATION:**

- Substrates: concrete and masonry
- Waterproofing and protection against water and moisture
- For cracks and areas of potential cracking foundations, slabs, retaining walls, drinking water structures, etc.

### **PROPERTIES:**

Owing to its composition of cement, quartz with well graded aggregate and selected additives, as well as the admixture of the polymer component, a waterproof and elastic coating is achieved. The initial and final bonding ability of Pro-Struct 546 Flexible Cementitious Waterproofer is excellent, making it suitable to be applied on horizontal as well as vertical surfaces. It is durable, resistant to frost and heat after setting and at the same time vapour permeable. It is an active barrier to carbon dioxide (CO<sub>2</sub>) and resistant to water aggressive for concrete. Pro-Struct 546 Flexible Cementitious Waterproofer is tested for use in contact with drinking water.

### **TYPICAL PROPERTIES**

|   |                             |
|---|-----------------------------|
| <b>Appearance</b>   |                             |
| Dry Component (Pro-Struct 875 Cementitious Waterproofer)        | Grey powder                 |
| Polymer Component (Pro-Struct 546 Flexible Cementitious Liquid) | Milky white liquid          |
| <b>Colour</b>   |                             |
| Wet mix   | Grey                        |
| Hardened  | Grey                        |
| <b>Density of wet mix</b>                                       | Approximately 1.65 kg/litre |
| <b>Workability at 20°C</b>                                      | Approximately 30 minutes    |
| <b>Setting time at 20°C – Polymer Component</b>                 | Approximately 3 to 6 hours  |
| <b>Elongation at 20°C – Polymer Component</b>                   | Approximately 13%           |
| <b>Tear resistance at 20°C – Polymer Component</b>              | Approximately 0.9 MPa       |
| <b>Crack bridging capacity at +20°C – Polymer Component</b>     | ≤ 0.4mm                     |

All data is averages of several tests under laboratory conditions. In practice, climatic variations such as temperature, humidity and porosity of substrate may affect these values.

# APPLICATION INSTRUCTIONS

These instructions are not intended to show product recommendations for specific service. They are issued as an aid in determining correct surface preparation, mixing instructions and application procedure. It is assumed that the proper product recommendations have been made. These instructions should be followed closely to obtain the maximum service from the materials.

## **SURFACE PREPARATION:**

The substrate to be treated must be sound and even, open-pored, roughened and its surface free from voids, large cracks or ridges. Any adhesion reducing substances like bitumen, oil, grease, remains of paint or laitance have to be removed by suitable means – water leaks must be stopped, e.g. with Pro-Struct 548 Plug. The substrate may be slightly damp, but must not be saturated with water.

### Brick and blockwork substrates:

Any remaining plaster, render or other substances that could inhibit bonding must be removed back to the substrate. Gypsum, remains of wood or other foreign material must be removed by appropriate means. Loose pointing must be routed out and the substrate cleaned thoroughly.

Any water leaks must be stopped with Pro-Struct 548 (see application procedure below):

- Each leaking area must be cut back to sound material, leaving a chase approximately 15mm deep to receive the Pro-Struct 548.
- 1kg of Pro-Struct 548 must be mixed with approximately 0.25 litres of water with a slow speed mixer (mixing time a maximum of 15 seconds).
- Immediately after mixing, Pro-Struct 548 must be applied to the appropriate area by working into place and holding firmly for approximately 2 minutes (rubber gloves should be worn).
- Pressure is to be maintained without disturbing the material until it has set.
- Excess material must be removed by grinding.

The sealed leaks must be left for 1 hour at 25°C, after which Pro-Struct 526-MCI can be applied on a saturated pre-wetted surface.

## **MIXING:**

Before use, shake the container of the polymer component well. Mix 25kg of Pro-Struct 875 Cementitious Waterproofer with 9kg of Pro-Struct 546 Flexible Cementitious Liquid in a clean container for at least 3 minutes to a lump-free, homogenous consistency. Use a high speed mechanical mixer. Where site conditions require, rinse the container with clean water and add it to the mixture.

## **APPLICATION:**

Pro-Struct 546 Flexible Cementitious Waterproofer is applied with trowel or suitable spray equipment.

Depending on the slurry consistency, a maximum of 4kg/m<sup>2</sup> can be applied in one working cycle. In most cases, the application of more than one coat is recommended. Please refer to relevant specification.

If several coats are applied, the previous coat must not be damaged during application of the following coat. The waiting time before applying the following coat depends on local climatic conditions such as humidity, temperature, etc. The previous coat is textured by suitable means whilst still plastic to form a key.

### Trowel Application:

First a scratch coat is applied for maximum adhesion to the substrate, working from the bottom up. Ensure that all cavities in the substrate are filled in order to exclude any trapped air.

### Spray Application:

Pro-Struct 546 Flexible Cementitious Waterproofer can be applied with a suitable fine mortar spraying device. For maximum spray pattern, it should be possible to adjust volume of product as well as air pressure and volume. The nozzle diameter is approximately 6mm. The first layer of Pro-Struct 546 Flexible Cementitious Waterproofer is applied in circular motion with the spray nozzle held at a 90° angle to the substrate. The material is then flattened and keyed. The final layer can be left as a spray finish or treated to a specified finish.

Do not apply at temperatures below +5°C, or to a frozen substrate.

**CAUTION: MAY CONTAIN FLAMMABLE SOLVENTS.** KEEP AWAY FROM SPARKS AND OPEN FLAMES. IN CONFINED AREAS WORKMEN MUST WEAR FRESH AIRLINE RESPIRATORS. HYPERSENSITIVE PERSONS SHOULD WEAR GLOVES OR USE PROTECTIVE CREAM. ALL ELECTRONIC EQUIPMENT AND INSTALLATIONS SHOULD BE MADE AND GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. IN AREAS WHERE EXPLOSION HAZARDS EXIST, WORKMEN SHOULD BE REQUIRED TO USE NON-FERROUS TOOLS AND TO WEAR CONDUCTIVE AND NON-SPARKING SHOES.



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## COVERAGE:

| Type of water impact | Recommended overall application rate                      | Number of layers |
|----------------------|---|------------------|
| Pressureless water   | 2.5 to 3.5kg/m <sup>2</sup>                               | 1 to 2           |
| Water under pressure | 3.5 to 5.5kg/m <sup>2</sup> , depending on water pressure | 2 to 3           |

Note: Substrate and application conditions have to be observed. Depending on surface roughness, consumption may vary.

## CURING:

Provide suitable protection against extreme weather conditions (e.g. rain, sun, wind, frost) while setting. The freshly treated surfaces should be protected from rain for a minimum period of 24 hours. The Pro-Struct 546 Flexible Cementitious Waterproofing must be fully cured before getting into contact with water. Avoid formation of water films or condensation on top of coating during 7 days after application. Provide a relative humidity of 60 to 80% and good air exchange in enclosed areas.

## BACKFILLING:

Backfilling can be carried out 3 days after completion of the Pro-Struct 546 Flexible Cementitious Waterproofing treatment. If there is a risk that the layer of Pro-Struct 546 Flexible Cementitious Waterproofing will be damaged during backfilling (sharp-edged material), it must be protected by suitable means.

## COATING:

Surfaces treated with Pro-Struct 546 Flexible Cementitious Waterproofing which are to be coated or painted should be left to cure for at least 28 days. Coatings on top of a Pro-Struct 546 Flexible Cementitious Waterproofing treatment have to be alkali resistant. Decorative coatings applied on the passive water pressure side are recommended to be vapour permeable. When applying paint on an elasticized polymer modified product, it must have equivalent elastic properties.

## FILLING OF WATER RETAINING STRUCTURES:

Filling can take place when the surface treatment has hardened sufficiently, usually not less than 14 days after application. A careful cleaning and disinfection prior to the first operation is essential. Observe national laws and regulations.

## PACKAGING:

|   |                |
|---|----------------|
| Pro-Struct 875 Cementitious Waterproofing   | 25kg Paper bag |
| Pro-Struct 546 Flexible Cementitious Liquid | 9kg Container  |

## STORAGE:

**Pro-Struct 875 Cementitious Waterproofing:** When stored in a dry place in unopened, undamaged original packaging, shelf life is 12 months.

**Pro-Struct 546 Flexible Cementitious Liquid:** Store in a frost-free place. Shelf life in unopened, undamaged original packaging is 8 months.

## HEALTH AND SAFETY:

Pro-Struct 546 Flexible Cementitious Waterproofing contains cement. Irritating to respiratory system and skin. Risk of serious damage to eyes. Keep out of reach of children. Do not breathe dust. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye / face protection. If swallowed, seek medical advice immediately and show this container or label. Provide good ventilation if handling bigger quantities or in enclosed areas. For more information, please refer to the actual Safety Data Sheets for Pro-Struct 875 Cementitious Waterproofing and Pro-Struct 546 Flexible Cementitious Liquid.

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