## Nano-modified Cementitious Penetrating Crystalline Waterproofing Primer

## Incorporating nanotechnology into cementitious crystalline waterproofing primer

#### Introduction

**Growseal™ CCP** nano-modified cementitious penetrating crystalline waterproofing primer is a surface applied, unique treatment with nanotechnology for both interior and exterior application. **Growseal™ CCP** primer has excellent adhesion and bonding properties even on minor surface damaged or casting of concrete substrate.

#### Product Description

Growseal™ CCP primer is a two component, rapid curing, waterproofing primer for consistent and durable adhesion on concrete substrate. Growseal™ CCP primer is especially designed to be absorbed into the surface of concrete substrate, to fill imperfections and to create a smooth surface for receiving Growseal™ Nano-brush Coat / Brushcoat Plus cememtitious waterproofing membrane. It can be used in area subject to hydrostatic pressure and uprising moisture.

### Advantage

- 1. Fast curing overcoat possible after 2 hours
- 2. Consolidate dusty or friable concrete surface
- 3. Good penetration into concrete substrate
- 4. Can be applied on concrete substrate with uprising moisture.
- 5. Good Micro-cracks sealing.
- 6. Excellent adhesion on dry and damp concrete surface
- 7. Become an integral part of the substrate
- 8. Low alkali-corrosion
- 9. Excellent abrasion resistance
- 10. Compatible with polymer-based cementitious waterproofing coating
- 11. Pre-packed, easy to mix and apply
- 12.Low VOCs

#### Recommended for

**Growseal™ CCP** primer is a versatile primer on concrete substrate for use with cementitious waterproofing membrane.

- RC flat roof and gutter
- Swimming pools, decks and water features
- Balconies, terraces and planter boxes
- Bathrooms and kitchens
- Potable water tanks

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Key Features

Bonding strength on concrete (ASTM D4541 & BS :

EN 1542)

≥ 1.4 MPa

Water Vapor Resistance (1000 sq.ft. per day)

≤ 35 pounds

Waterproof against positive and negative pressured

water (UASCE CRD C48)

Up to 14 bar water pressure

Bonding strength of Growseal™ CCP primer to

Growseal™ Nano-brush Coat / Brushcoat Plus

≥ 1.2 MPa

Water permeability against positive side water

pressure (DIN1048-5)

Maximum water penetration depth 26mm (0.7 MPa water

pressure for 72 hours)

Flexural strength 28days (ASTM C348) :  $\geq$  5 MPa

Compressive strength 28days (ASTM C109) : ≥ 20 MPa

Penetration depth of active agents 28days : > 5mm

VOC (USEPA method 24) : Type of regulated paint under Air Pollution Control

(Volatile Organic Compounds) Regulation < 20 g/L

Technical data

Product Type : Two component nano-modified cementitious penetrating crystalline waterproofing

primer

Mixed Components

Component A : Fine grey cementitious powder

Component B : Blue liquid

Mixed Ratio : 5 parts component A : 2 parts component B

Mixed Color : Concrete Grey

Mixing Procedure : Mixing for ~ 7 minutes (e.g. 14Kg Part A + 5.6Kg Part B)

Application Data

Coverage : 1 Coat: 0.75mm thickness (Approx. 1.25kg/m²)

Number of coat : 1 layer

Consistency : Brush

Over coating time : 2-4 hours (Over coating time may be varied by temperature and humidity change)

Coverage mass : 1.25 kg/m<sup>2</sup>



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Minimum application temperature: +8°C; Maximum application temperature: +35°C.

Please cool down the substrate with water before application, if the temperature of substrate is over 40°C.

Add maximum 500ml deionized water into component B before mixing with component A when application under direct sun with temperature above 32°C.

Application relative humidity: 60-95%

Do not apply when raining or when rain is expected before the coating has dried.

### Working life

At 20°C approx. 30 mins; At 30°C approx. 20 mins.

#### Preparation of the substrate

All concrete substrate to be treated with **Growseal<sup>TM</sup> CCP** primer must be clean and have an "open" capillary surface. Laitance, dirt, grease, etc. can be removed by high pressure water jetting, wet sandblasting or wire brushing. Faulty concrete in the form of cracks, honeycombing, etc. must be chased out. Surfaces must be carefully pre-watered prior to the application. The concrete surface must be damp but without the presence of standing water. If concrete dries out before application, it must be re-wetted.

#### Mixino

Pour all liquid components (component B) into a clean dry mixing container and mix using a slow speed drill fitted with a S shaped paddle. Slowly add the powder component A into the liquid and continue to mix. When all of the powder has been added, increase the mixing speed (about 600rpm) and continue to mix for ~ 7 min to achieve a lump-free slurry. Do not mix more **Growseal™ CCP** primer than can be applied in 20 minutes. As the mixture thickens, stir briefly to ensure mixture remains fluid; but DO NOT ADD MORE WATER.

### Applying Growseal™ CCP primer on concrete substrate

Growseal™ CCP primer on the substrate can be applied by brush. Growseal™ CCP primer treatment must not be applied when raining or when rain is expected before the coating has dried. Avoid application of Growseal™ CCP primer coating in hot and windy conditions as the coating may dry out prematurely. The treated areas should be protected against direct sun, wind and frost, by covering with polyethylene sheeting, damp burlap or similar.

#### Limitation

**Growseal™ CCP** primer is an effective waterproofing primer for rigid concrete structure only and may not be reliable for structure with unstable, moving cracks and joints.

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### Cleaning of Tools

Tools and equipment should be cleaned directly after use with water. Do not allow this mortar to harden before removing.

## **Storage**

**Growseal™ CCP** primer must be stored in a dry place free from contact with moisture and frost. This product has a 12 month shelf life stored in original unopened containers if kept at 10-30°C.

Packing: (14Kg Part A + 5.6Kg Part B) in one plastic bucket

#### Handling

**Growseal™ CCP** primer is nonhazardous, but works with cleaning and wear protective clothing. In windy conditions wear a filter mask to avoid inhaling dust. Remove splashes from skin with water and in case of eye contract wash copiously with water and if irritation persists seek immediate medical attention. For further information refer to the relevant Health and Safety Data Sheet.

We endeavor to ensure that any advice, recommendation or information we may give in product literature is accurate and correct. However, we have no control over the circumstances in which our product is used and it is therefore important that the end user satisfy himself by prior testing that the product is suitable for his specific application and that the actual conditions of use are suitable. GrowTech Limited reserves the right to change the properties of its products. Products are sold subject to our standard conditions of sale and each purchaser and end user should at all times ensure that he has consulted our latest product instructions and safety information.