

PREPRUFE[®] Grout CEM 100

Cementitious, non shrink grout for re-profiling of pile heads.

Product Description

PREPRUFE[®]Grout CEM 100 is a high strength, cementitious, non shrink grout for re-profiling of pile heads prior to the application of PREPRUFE[®]Grout EG 75. When used with PREPRUFE[®]Grout EG 75, continuity of PREPRUFE[®] waterproofing systems at pile heads and similar structural penetrations is achieved. PREPRUFE[®]Grout CEM 100 contains cements, graded mineral aggregates and polymers which are pre-blended in a 25 Kg bag.

Measured addition of the recommended amount of clean water produces a free flowing, high strength, non shrink grout.

Product Advantages

- compatible with PREPRUFE[®] Grout EG 75
- low permeability
- shrinkage compensated (non shrink)
- high bond to concrete substrates
- rapid strength gain
- high compressive and flexural strengths
- flowable consistency
- chloride free
- easy mixing and placing

System Components

To achieve continuity of PREPRUFE[®]sheet waterproofing systems at pile heads and similar structural penetrations, you will need the following system components.

- PREPRUFE[®] Grout EG 75 – impermeable epoxy grout for waterproofing of pile heads (see separate product data sheet)
- BITUTHENE[®] LM – high performance, liquid membrane
- PREPRUFE[®] 300R sheet membrane
- PREPRUFE[®] Tape – for sealing of laps in PREPRUFE[®] sheet membranes
- ADCOR[®] 500S – hydro-expansive waterstop for concrete construction joints

Applications

- recommended thickness range 10 mm to 100 mm
- re-profiling of pile heads before the application of PREPRUFE[®] Grout EG 75
- re-profiling of structural penetrations through PREPRUFE[®] sheet waterproofing systems before the application of PREPRUFE[®] Grout EG 75

Product Application

Surface Preparation:

Concrete substrates should be free from laitance, surface contaminants and curing compounds. Remove any friable material and laitance by mechanical means. Remove rust from any reinforcement that will be encapsulated by the cementitious grout. Adhesion to smooth substrates can be improved by using DARAWELD® BA3 acrylic bonding agent (see separate product data sheet). Saw cut where necessary to avoid feather edges. Continuously pre-soak the substrate with clean water for at least an hour before grout application, this ensures substrate saturation. Remove any ponded water immediately before grout application, manually or with an air lance.

Formwork:

Formwork must be constructed to be leak-proof as PREPRUFE®Grout CEM 100 is fluid when mixed. Seal all joints in formwork with a cartridge of sealant/adhesive. All formwork should be coated with a mineral oil or water based release agent, before the grout is placed.

Mixing and Placing:

Measured addition of the correct amount of clean water is essential for grout consistency and to avoid cracking. Measure 3.50 to 3.75 litres of clean water into a clean 20 litre pail, slowly add the full 25 Kg grout contents from the bag, whilst mixing continuously with a clean paddle mixer and slow speed drill (max 400 rpm). Scrape in any unmixed material from the side and bottom of pail with a trowel. Mix for a minimum of five minutes or until a fluid homogenous consistency is achieved. For large volume grout mixes, use a high shear vane mixer or similar. Pour the grout from the pail into the forms continuously, if more than 13 litres of grout is required, mix the next unit whilst the first is being poured to enable continuous placement. At ambient temperatures of more than 35°C, store products in the shade and use chilled water for mixing. This will maximize working time when mixed.

Surface Preparation Whilst Plastic

To maximise interface adhesion between PREPRUFE®Grout CEM 100 and PREPRUFE®Grout EG 75, the upper surface of PREPRUFE®Grout CEM 100 should be scored with a notched trowel, while the material is in its plastic state. Alternatively, wait until the cementitious grout has hardened and prepare the surface by sand blasting or a similar mechanical method.

Cleaning:

Clean mixers and trowels with water.

Supply, Estimating and Storage

SUPPLY	25 KG PAPER BAGS
Water addition for flowable consistency	3.50 – 3.75 Lts/25 kg
Water addition for mortar consistency	3.50 – 3.75 Lts/25 kg
Yield at flowable consistency	13 Lts/25 Kg

Store unopened in original packaging in cool dry conditions.

Shelf life in these conditions is 12 months from date of manufacture.

Technical Data

PREPRUFE® GROUT CEM 100	TYPICAL VALUE	TEST METHOD
Thickness range	10 mm –100 mm	
Fresh wet density at fluid consistency	2.20 Kg/Lit	EN 12350-6
Working time at 25°C	20 mins	
Compressive strength 7 day at 23°C	60 N/mm ²	ASTM C 109
Compressive strength 28 day at 23°C	75 N/mm ²	ASTM C 109
Flexural strength 28 day at 23°C	10 N/mm ²	BS 6319 : Part 3
Bond strength to concrete 28 day at 23°C	1.5 N/mm ²	ASTM D 4541
Water penetration	< 10 mm	BS 12390-8

Note: All test results shown in this data sheet are determined under laboratory conditions, using product samples taken from inventory in original packaging, without alteration or modification.

Health and Safety

Before using this product, read the product labels and comply with all health and safety advice. Further health and safety information is available from the products Safety Data Sheet (SDS) available from GCP or on line at gcpat.com.

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