



CONPLAST WP421

General purpose integral waterproofing for concrete

Uses

To waterproof concrete such as structural and precast concrete, renderings, screeds and granolithic toppings. Ideal to be used for basements, swimming pools, concrete roof, ground tank, reservoir, etc.

Advantages

- Watertight – minimize water penetration into concrete.
- Increase compressive strength. The water reducing properties of Conplast WP421 enables higher compressive strengths to be obtained in concrete at the same workability.
- Increase plasticity – easier workability
- Easy to use
- Integral - not a membrane or surface film and its properties maintained when the surface damages.
- Chloride free

Description

Conplast WP421 is a brown liquid material instantly dispersible in water that is added to concrete to inhibit the passage of water, contains a non-air entraining plasticizer to assist optimum compaction, and selected antifoam agent to reduce the water penetration.

Technical support

Fosroc provides a technical advisory service for on-site assistance and advice on admixture selection, evaluation trials and dispensing equipment. Technical data and guidance can be provided for admixtures and other products for use with fresh and hardened concrete.

Properties

Chloride content : Nil to BS 5075

Specific gravity : 1.16 at 25⁰c

Compressive strength : Independent test below was carried out to measure compressive strength, and water penetration after 28 days. The test was carried out using normal/control mix design and with Conplast WP421.

Recommended Mix Proportion

| | |
|--------------------|---------------------------------|
| Cement | minimum 350 kg/m ³ |
| Water cement ratio | maximum 0.45 |
| Initial Slump | 80 ± 20mm |
| Conplast WP421 | dosage 1.5-2 ltr/m ³ |
| Final Slump | 140 - 200 mm |

Specification Clauses

"The concrete shall be waterproofed with Conplast WP421 as supplied by the manufacturers and used strictly in accordance with their instructions".

For more complete specification, the following paragraph can be added :

"For waterproof concrete, the mix shall consist of:

Cement to BS 12 (OPC) or BS 4027 Sulphate resisting (state type)

5 – 20 mm graded gravel aggregate to BS 882

Grade M washed sand to BS 882

Conplast WP421, maximum 4 liter/m³

The concrete shall be fully compacted by mechanical vibration and shall then be cured using Concure curing membrane, wet hessian or damp sand".

Application instructions

Conplast WP421 will not make poor concrete become waterproof. Good concrete practice must be followed at all times. Care must be taken to ensure good grading of the aggregates and minimum cement content of 350 kg/m³ is recommended. For other specification please consult with Fosroc Technical. Adequate waterstop between lifts and floors bays must be provided in accordance with BS 5337.

Dosage

Conplast WP421 for waterproofing mass and structural concrete is added at the rate of 1.5 – 4.0 liter per m³. Optimum dosage should be obtained by site trials.

Overdosing

An overdose of Conplast WP421 will result in retardation of the concrete, but the ultimate strength of concrete will not be reduced provided good curing is maintained.

Joint

Swelable waterstop Supercast SW 10 or Supercast PVC type are recommended to provide an integral sealing system for construction joint in cast in situ concrete.

Curing

Good curing methods should be used, such as water spray, wet hessian, or the use of a curing membrane of the Concure* type.

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Packaging

Conplast WP421 is supplied in 20 liter pails or 210 liter drums.

Storage

Conplast WP421 has a minimum shelf life of 12 months provided the temperature is kept within the range 2⁰c to 50⁰c.

Precautions

Health and safety

Conplast WP421 is slightly toxic and must not be ingested. It is mildly alkaline and prolonged contact with the skin must be avoided, splashes to the skin should be removed with water. In the event of splashes to the eyes should be washed immediately with plenty of water and seek medical advice.

Additional information

Technical data and guidance can be provided on a wide range admixtures and concreting aids including accelerators, plasticisers, air entraining agents, waterproofer, mould release agents, surface retarders, workability aids, grouts and repair materials.

* See separate data sheet

Table

| Admixture | Cement Type I (kg/m ³) | Fine Aggregate (kg/m ³) | Coarse Aggregate 10/20 (kg/m ³) | Free Water (ltrs/m ³) | Compressive Strength | | Penetration DIN 1048 28 days |
|----------------|------------------------------------|-------------------------------------|---|-----------------------------------|---------------------------|----------------------------|------------------------------|
| | | | | | 7 days kg/cm ² | 28 days kg/cm ² | |
| Control | 360 | 780 | 1030 | 200 | 285 | 410 | 4.75 cm |
| Conplast WP421 | 360 | 780 | 1030 | 160 | 376 | 520 | 2.2 cm |



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