



Conplast X421M

High performance integral waterproofing for concrete

Uses

To waterproof concrete and cement/sand mixes such as structural and precast concrete, renderings, brick mortar, screeds and granolithic toppings. Ideal to be used for basements, swimming pools, concrete roof, sea walls, ground tank, leesevun, etc.

Advantages

- Watertight - minimize water penetration into concrete.
- Reduces water absorption of the concrete
- Increase compressive strength. The water reducing properties of Conplast X421M 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 X421M is a brown liquid that is added to concrete to inhibit the passage of water, and contains a non-air entraining plasticizer to assist optimum compaction, selected antifoam agent and hydrophobic polymer to repel external water.

Technical Support

Fosroc provides a technical advisory service 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 25°C

Compressive strength : Independent test below was carried out to measure compressive strength, water penetration, and absorption after 28 days. The test was carried out using normal/control mix design and with Conplast X421M.

Recommended Mix Proportion

| | |
|--------------------|--|
| Cement | 350 kg/m ³ |
| Water cement ratio | 0.45 |
| Initial Slump | 80 ± 20 mm |
| Conplast X421 M | average dosage 2 liter/m ³ |
| Final Slump | 140 - 200 mm |

Specification clauses

"The concrete shall be waterproofed with Conplast X421M 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) 01 BS 4027 Sulphate resisting (state type) 5-20 mm graded gravel aggregate to BS 882 Grade M washed sand to BS 882 Conplast X421M, 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 X421M will not make poor concrete become waterproof. Good 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. Adequate waterstop between lifts and floors bays must be provided in accordance with BS 5337.

Dosage

Conplast X421M for waterproofing mass and structural concrete is added at the rate of 2 - 4 liter per m³. Optimum dosage should be obtained by site trials.

Overdosing

An overdose of Conplast X421M will result in retardation of the concrete, but the ultimate strength of concrete will not be reduced provided good curing is maintained.

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Joint

Swellable waterstop Supercast SW 10 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 nessian, or the use of a curing membrane of the Concurs' type.

Packaging

ConplastX421M is supplied in 20 liter or 210 liter drum.

Storage

Conplast X421M has a minimum shelf life of 12 months provided the temperature is kept within the range 2°c to 50°c.

Precautions

Health and Safety

Conplast X421M 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 Instruction

Conplast X421M was formerly known as Conplast Propalin 421.

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

* See separate data sheet

Table

| Admixture | Cement TypeI (kg/m ³) | Fine Aggregate (kg/m ³) | Coarse Aggregate 10/20 (kg/m ³) | Free Water (Ltr/m ³) | Compressive Strength | | Penetration DIN 1048 28 days | % Water Absorbed 28 days |
|----------------|-----------------------------------|-------------------------------------|---|----------------------------------|---------------------------|----------------------------|------------------------------|--------------------------|
| | | | | | 7 Days kg/cm ² | 28 Days kg/cm ² | | |
| Control | 380 | 761 | 1030 | 200 | 292 | 460 | 4.6cm | 3.03 |
| Conplast X421M | 380 | 761 | 1030 | 165 | 298 | 551 | <2cm | <2.0 |



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