

MasterLife 300D

Crystalline capillary waterproofing admixture

Material Description

MasterLife 300D admixture is an integral crystalline capillary waterproofing admixture for concrete. It is designed for use in above and below grade applications.

Areas of Application

- Sewage and water treatment plants
- Liquid retaining structures
- Water reservoirs and tanks for potable water
- Swimming pools
- Foundations, basements, lift pits, podiums, balconies and roofs
- Parking structures
- Precast, pre-stressed and post-tensioned concrete
- Culverts
- Blockfill
- Tunnel and subway systems
- Shotcrete
- Concrete subjected to wet, harsh and aggressive environments

Characteristics and Benefits

- Reduces concrete permeability – optimises durability of concrete
- Reduces penetration of water and other liquids
- Allows concrete to breathe
- Seals hairline cracks
- Resists positive and negative side hydrostatic pressure
- Protects against sewage and industrial wastes

Performance Characteristics

Permeability

MasterLife 300D capillary waterproofing admixture is a Portland cement-based crystalline cementitious material that reacts in concrete to form non-soluble crystalline hydration products in the capillary pores of the concrete. These crystalline hydration products effectively reduce the permeability of concrete thus reducing capillary absorption and the penetration of water and other liquids.

Certification for use with Potable Water

MasterLife 300D is certified by NSF to NSF/ANSI Standard 61 – Drinking Water System Components – Health Effects, and therefore it is suitable for use in properly cured concrete structures in contact with potable water.

Typical data for **MasterLife 300D** admixture @ 2% by weight of cement

Performance characteristic	Test Method	Performance relative to untreated concrete mixture
Capillary absorption	ASTM C 1585	43% reduction
Water penetration	Modified DIN 1048	40% reduction
Moisture vapour emission rate	ASTM F 1869	Same
Electrical conductance	ASTM C 1202	Same
Compressive strength	ASTM C 39/C 39M	7% increase.

Master Builders Solutions recommends the use of **MasterLife 300D** admixture in good quality concrete with a maximum water-cementitious materials ratio of 0.45. in good quality concrete with a minimum cementitious content of 350kgs/m³, and a minimum compressive strength of 28 MPa.

Application

(A) Dispensing & Mixing

MasterLife 300D admixture is batched at the concrete production plant in a manner similar to that for cement or other cementitious materials. It may be batched in either a central or truck mixer. Provide at least 5 minutes of agitating after the addition of **MasterLife 300D** admixture to ensure thorough and uniform distribution of the admixture in the concrete mixture.

Dosage

The dosage for **MasterLife 300D** admixture is 2% by weight of binder.



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Compatibility

MasterLife 300D admixture can be used with Portland cements approved under Australian and New Zealand standards. It is compatible with most concrete admixtures, including all Master Builders Solutions admixtures. MasterLife 300D admixture is recommended for use with high-range water reducing admixtures, such as the MasterGlenium series, for maximum workability while maintaining a low water/binder ratio.

Repairs

To repair and seal cracks in concrete and mortars treated with MasterLife 300D the use of MasterSeal 501 is recommended. MasterSeal 502 is a crystalline re-profiling render, which can be used in conjunction with MasterSeal 501 for patch repairs and as render on old concrete surface.

Corrosivity

Non-chloride, non-corrosive: MasterLife 300D admixture will neither initiate nor promote corrosion of reinforcing or pre-stressing steel embedded in concrete or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of MasterLife 300D admixture.

Disclaimer

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