

# MasterLife® 300D

## Crystalline Capillary Waterproofing Admixture

### Description

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

MasterLife 300D admixture meets ASTM C 494/C 494M requirements for Type S, Specific Performance, admixtures.

A red-pigmented version of MasterLife 300D admixture is also available.

### Applications

Recommended for use in:

- Foundations
- Sewage and water treatment plants
- Tanks
- Underground vaults
- Tunnel and subway systems
- Water reservoirs
- Secondary containment structures
- Below-grade parking structures
- Precast components
- Swimming pools

### Features

- Crystalline cementitious material
- Integral addition
- Reduces concrete permeability
- Allows concrete to breathe

### Benefits

- Reduces penetration of water and other liquids
- Seals hairline cracks
- Resists positive and negative side hydrostatic pressure
- Protects against sewage and industrial wastes

### Performance Characteristics

**Setting Time:** MasterLife 300D admixture has little to no effect on concrete setting time within the recommended dosage range.

**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.

#### Typical Data for MasterLife 300D admixture @ 2% by mass 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 Vapor Emission Rate	ASTM F 1869	Same
Electrical Conductance	ASTM C 1202	Same
Compressive Strength	ASTM C 39/C 39M	7% increase

## Guidelines for Use

**Concrete Quality:** Crystalline capillary waterproofing admixtures such as MasterLife 300D admixture, are categorized as Permeability-Reducing Admixtures (PRAs) in ACI 212.3R-16, Report on Chemical Admixtures for Concrete. These admixtures “are intended to be used in, and complement, well-proportioned concrete mixtures, not to compensate for poorly proportioned concrete mixtures. Although recommendations differ from each manufacturer, a w/cm of 0.45 or less is typical for concrete designed to resist water movement.” In accordance with the recommendations provided in ACI 318, ACI 350 and ACI 212.3R, BASF recommends the use of MasterLife 300D admixture in good quality concrete with a maximum water-cementitious materials ratio of 0.45 and a minimum compressive strength of 4000 psi (28 MPa).

**Dosage:** The dosage range for MasterLife 300D admixture is 2% to 2.5% by mass of cement. For most applications, the recommended optimum dosage of MasterLife 300D admixture is 2% by mass of cement. The dosage of the red-pigmented version of MasterLife 300D admixture is 2.5% by mass of cement. Please contact your local sales representative for additional information regarding the dosage of MasterLife 300D admixture for your application.

**Dispensing and 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. Follow the procedures outlined in ASTM C 94/C 94M, Standard Specification for Ready-Mixed Concrete, for general batching and mixing instructions for concrete. Provide at least 5 minutes of mixing after the addition of MasterLife 300D admixture to ensure thorough and uniform distribution of the admixture in the concrete mixture.

## Product Notes

**Corrosivity – Non-Chloride, Non-Corrosive:** MasterLife 300D admixture will neither initiate nor promote corrosion of reinforcing or prestressing 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.

**Compatibility:** MasterLife 300D admixture can be used with portland cements approved under ASTM, AASHTO or CRD specifications. It is compatible with most concrete admixtures, including all BASF 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-to-cementitious materials ratio.

## Storage and Handling

MasterLife 300D admixture must be stored in a clean, dry area maintained at a minimum temperature of 45 °F (7 °C). MasterLife 300D admixture has a shelf life of one year when stored under recommended conditions.

## Packaging

MasterLife 300D admixture is available in 12 lb (5.5 kg) and 24 lb (11 kg) shreddable bags, and in 12 lb (5.5 kg) water-soluble bags. The red-pigmented version of MasterLife 300D admixture is available in 15 lb (7 kg) and 30 lb (14 kg) shreddable bags.

## Related Documents

Safety Data Sheet: MasterLife 300D admixture

## Additional Information

For additional information on MasterLife 300D admixture or its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

*The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.*

## Limited Warranty Notice

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