

MasterLife[®] WP 3760

Crystalline Waterproofing Admixture for Concrete & Mortars

Material Description

MasterLife[®] WP 3760 crystalline waterproofing powder admixture is an integral crystalline capillary waterproofing admixture for concrete. It is designed for use in above- and below-grade applications.

MasterLife[®] WP 3760 consists of Portland cement, very fine treated silica sand and various active, proprietary chemicals. These active chemicals react with the moisture in fresh concrete with the by-products of cement hydration to cause a reaction, which generates an insoluble crystalline deposit throughout the pores and capillary tracts of the concrete. Thus the concrete with **MasterLife[®] WP 3760** reduces water permeability. This product also has a selfhealing property under presence of moisture and can heal cracks below 0.4 mm.

Areas of Application

MasterLife[®] WP 3760 should be used in all structural concrete that is constantly or intermittently in contact with water such as sea walls, tunnels, basements, structural and precast concrete. **MasterLife[®] WP 3760** can also be used as crystalline waterproofing admixture for cement mortars and plasters. To waterproof structures such as:

- Building Basement and foundations
- Sewage and water treatment plants
- Dams, canals, Tunnels, Harbours
- Tunnel and subway systems
- Water reservoirs
- Concrete pipes
- Parking structures

- Pre-Cast, Cast-in-Place and Shotcrete applications
- Swimming pools
- Retaining walls & sea defense walls

Characteristics and Benefits

MasterLife[®] WP 3760 offers the following benefits:

- Crystalline cementitious material
- Integral addition
- Reduces concrete permeability
- Allows concrete to breathe
- Non toxic
- Becomes an integral part of the concrete.
- Reduces penetration of water and other liquids
- Can seal hairline cracks up to 0.4 mm.
- Resists positive and negative side hydrostatic pressure
- Protects against sewage and industrial wastes
- Less expensive than traditional methods
- Added to the concrete at time of batching and therefore is not subject to climatic restraints

Processing Method

MasterLife[®] WP 3760 additive is dosed in concrete production plants in the same way as cement or other cement-equivalent materials. It can be added to the central mixer or transit mixer via the aggregate belt. After adding **MasterLife[®] WP 3760** to the transit mixer, ensure that it is thoroughly mixed at high speed for 5 minutes. To achieve a more homogeneous mixture of **MasterLife[®] WP 3760** in the transit mixer, it must first be mixed with water in

Technical Properties

Appearance	Grey Powder
Specific gravity (20°C)	1.345-0.025 kg/lit
Chloride Content (%)	"chloride free" to EN 934
Corrosion Behaviour	Non-corrosive
Dangerous Substances	Comply with annex AZ.

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a separate location to form a slurry before being added to the transit mixer. This method prevents clumping and ensures the best results.

Dosage

As a guide, a dosage of 1 - 2.5% of cementitious content is recommended. Typical dosage is 2% of cementitious content. For addition to ready mix concrete, a typical dosage of 6 - 7 kg per cubic meter of concrete is best recommended.

For addition information on **MasterLife[®] WP 3760** or on its use in developing concrete mixes with special performance characteristics, contact your local MBT Teknik Yapı Kimyasalları representative.

Points to remember when producing waterproof concrete:

- Ensure water / cement ratio is less than 0.5
- Addition of good superplasticiser from the **MasterRheobuild[®]** or **MasterGlenium[®]** range is advised to achieve minimum water/cement ratio.
- Place concrete quickly and compact it well.
- Ensure complete curing with a MasterKure[®] curing compound.

Performance Character

Setting Time:

MasterLife[®] WP 3760 admixture has little to no effect on concrete setting time within the recommended dosage range. However, it is recommended to test this in case any additives or blended cementitious combinations are used in concrete.

Permeability:

MasterLife[®] WP 3760 capillary waterproofing admixture is a portland cement-based crystalline cementitious material that reacts in concrete to form insoluble crystalline hydration products in the capillary pores/capillary tracts of the concrete. These crystalline hydration products are deposited and fill the pores and hairline cracks, effectively reduce the permeability of concrete, its capillary absorption and penetration of water and other liquids into the concrete.

Compatibility

MasterLife[®] WP 3760 admixture can be used with portland cements approved under ASTM and EN specifications. It is compatible with most concrete admixtures, including all Master Builders Solutions admixtures. **MasterLife[®] WP 3760** admixture is recommended for use with high-range waterreducing admixtures, such as the **MasterGlenium[®]** series, for maximum workability while maintaining a low water-to-cementitious materials ratio.

MasterLife[®] WP 3760 is also compatible with slag and pozzolans such as fly ash, GGBS and silica fume.

Packaging

MasterLife[®] WP 3760 is available in 20 kg polyethylene reinforced kraft bag.

Shelf Life

6 months if stored according to manufacturer's instructions in unopened container.

Storage

MasterLife[®] WP 3760 additive should be stored indoors in a dry environment where temperatures do not fall below +5°C. The presence of moisture and/or high humidity can cause premature deterioration of soluble packages. When removing single-dose packages from their outer carton, care should be taken to prevent moisture from entering the package.

Health and Safety

For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes,

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mouth, skin and foodstuffs, (which may also be tainted with vapor until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Spillage

Chemical products can cause damage; clean spillage immediately.

Disclaimer

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is only responsible for the quality of the product **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

Contact

MBT Teknik Yapı Kimyasalları San. ve Tic. A.Ş.
Eyüp Sultan Mah. Sekmen Cad. Hayy 1000A
No:26/8 Sancaktepe, İstanbul
Tel: 0216 561 35 45 www.mbt-tech.tr