

MasterPel[®] 760

Low Dosage, Crystalline Waterproofing and Durability Enhancing admixture for concrete & mortars

DESCRIPTION

MasterPel 760 is a hydrophilic crystalline powder admixture for concrete to achieve high resistance to water ingress. It is based on a blend of Portland cement, processed silica sand and special catalytic agents which converts hydration by-products to solid crystalline formation in the water transporting capillary tracts and hydration pores, thus rendering the concrete relatively impermeable and increasing durability.

RECOMMENDED USES

MasterPel 760 should be used in all structural concrete that is constantly or intermittently in contact with water or other aggressive environments such as sea walls, tunnels, basements, structural and pre-cast concrete. **MasterPel 760** can also be used as crystalline waterproofing admixture for cement mortars and plasters. To waterproof structures such as:

- Water tanks, Reservoirs
- Building Basements & foundations
- Swimming pools and water parks
- Sewage and Water treatment plants
- Dams, canals, Tunnels, Harbours
- Retaining walls & sea defence walls
- Concrete pipes

FEATURES AND BENEFITS

- Provides resistance to water penetration either under hydrostatic pressure or capillary absorption.
- Imparts integral water tightness to structures by reducing concrete permeability
- Protects from waterborne corrosive agents.
- Permanently active - crystalline action is reactivated by contact with water.
- Equally effective against both positive and negative water pressure or osmotic pressure.
- Reduced sulphate attack & efflorescence.
- Zero VOC (Volatile Organic Content)
- Seals hair line cracks.
- Allows concrete to breath.
- Non toxic-Safe with potable water applications.
- Do not reduce compressive strengths
- Powder – easy to use in pre-batched renders. MasterRheobuild / MasterPolyheed and MasterGlenium range is advised to achieve

PERFORMANCE TEST DATA

Aspect	: Free Flowing grey powder
Bulk Density	: 1.350 ± 0.02 gm/cm ³
Chloride ion content	: < 0.1% by mass
Alkali Content	: < 5% by mass
Compressive Strength	: ≥ 90% of control concrete
Air Content in fresh concrete	: ≤ 1.5% by volume
Dry Material Content	: > 99.5%

TEST CERTIFICATION/APPROVALS

- IS:2645-2003
- Meets ASTM C 494 / C 494 M requirements for Type S (Specific Performance Admixture)

DOSAGE

As a guide a dosage of 0.8% to 1.0% by weight of cementitious binder is recommended. Dosage up to 2.0% by weight of cementitious binder can be used in special requirements. For addition to ready mix concrete, a dosage of 5kg/m³ is best recommended.

For addition information on **MasterPel 760** or on its use in developing concrete mixes with special performance characteristics, contact your local Master Builders Solutions representative.

Points to remember when producing waterproof and durable concrete:

- Ensure water / cement ratio is less than 0.5
- Addition of good plasticiser from the minimum water/cement ratio.
- Place concrete quickly and compact it well.
- Ensure complete curing with a MasterKure curing compound.
- Low dosage, economical.

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APPLICATION

MasterPel 760 is a ready-to-use powder which is dispensed into the concrete together with the cement. Following sequence of mixing shall enable best performing waterproofing mix:

1. Batch coarse aggregates
2. Batch fine aggregates
3. Batch cement & mineral admixtures
- 4. Sprinkle MasterPel 760**
5. Dry mix for 1 to 2 minutes to achieve even dry mixture.
6. Add gauging water admixed with plasticiser (if required) and continue mixing to even consistency of the mix.

In case of addition at the ready-mix batching plant, use a 5 Kg dosage per cubic meter and add separately after introducing all other mix ingredients in the mixer and ensure uniform mixing.

In case of addition to the transit mixer on-site, produce a slurry by mixing 3 parts of **MasterPel 760** to 2 parts of gauged water by volume, and dose this slurry into the transit mixer. Ensure sufficient mixing time of at least 3 minutes (equivalent amount of water should be deducted while batching of concrete)

SUGGESTED SPECIFICATION

The crystalline powder waterproofer and durability enhancer shall be **MasterPel 760**, active catalytic agents based. The product shall comply with IS: 2645-2003 when tested at a dosage of 0.8% by weight of cementitious binder. The product must be free of chlorides.

COMPATIBILITY

MasterPel 760 is compatible with most admixtures used in the production of quality concrete including normal, other mid-range and high-range water-reducing admixtures, air entrainers, accelerators, retarders, extended set- control admixtures, corrosion inhibitors, and shrinkage reducers.

MasterPel 760 is also compatible with slag and pozzolans such as fly ash and silica fume.

CORROSIVITY – NON CHLORIDE , NON CORROSIVE

MasterPel 760 will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Neither calcium chloride nor any calcium chloride-based ingredients are used in the manufacture of **MasterPel 760**. In all concrete application, **MasterPel 760** will conform to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

WORKABILITY

MasterPel 760 has little or no effect on workability of concrete. Prior site trials are advised to assess the effect, and any increase or decrease in the workability can be adjusted by adjusting the admixture dosage or amount of water in use.

It is strongly recommended that concrete should be properly cured particularly in hot, windy and dry climates.

PACKAGING

MasterPel 760 is available in 25 kg pack.

STORAGE /SHELF LIFE

MasterPel 760 must be stored where temperatures do not drop below +5°C.

Shelf life is 6 months when stored as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult your local Master Builders Solutions representative.

PRECAUTIONS

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet. For further information refer to the material safety data sheet.

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RESPONSIBILITY
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