

MASTERSEAL™ 505

Ultra-rapid setting mortar to plug active water leaks in concrete and masonry

Description

MASTERSEAL 505 is a blend of hydraulic cements, well-graded sands and additives supplied in dry powder form. It requires only the addition of clean water to produce a ready-to-use, ultra-rapid setting, plugging mortar.

Water flow can be stopped by mixing the MASTERSEAL 505 to a malleable consistency and using as a plug.

Uses

- Stops active water or seepage under pressure through joints, cracks and holes in concrete or masonry, where a normal mortar would be washed away and resin would not bond
- As seal for construction joints or floor joints prior to basement tanking with MASTERSEAL
- For sealing cracks and construction joints in reservoirs and other water retaining structures
- For instant sewer connections
- For rapid anchoring of bolts, conduits, pipes, railings, sanitary equipments, etc.
- Joint filling, pointing between concrete segment in concrete and brick tunnels, sewage systems, pipes and mines.

Advantages

- Rapid setting - Typically 30 - 60 seconds.
- Easy to use - simply add water.
- Chloride free - no risk to steel reinforcement.
- Non-toxic - suitable for use in potable water systems.
- Premixed - giving consistent quality and results.

Typical properties

Aspect	: free flowing grey powder
Water powder ratio, by weight	: 0.18
Fresh wet density	: 2150 Kg/m ³
Final setting time	: 2-3 Minutes
Compressive Strength	: 8 MPa at 2 Hours
	: 20 MPa at 24 Hours

Specification Clause

The ultra-rapid setting mortar shall be MASTERSEAL 505, a cementitious powder, requires only addition of water to produce a ready to use, quick setting plugging mortar. The product shall attain minimum compressive strength of 8 MPa at 2 hours and 20 MPa at 24 hours. The formulation shall be free of chlorides and shall exhibit no cracking due to exothermic reaction.

Directions for use

Surface preparation

Surface to be plugged must be clean and free from dust, oils, grease, laitance, curing compounds, residual mould oils or other contaminants that could impair adhesion.

Preferably, cracks or holes should be cut to a minimum width and depth of 20mm, cutting the sides as square as practicable. Undercut if possible. Avoid leaving a V-section. Do no feather-edge.

For plugging active leaks: Cut out the opening to a minimum diameter of 20 mm or till a sound base is obtained.

For sealing the wall/floor joint in an existing construction: cut out the joint/crack at least 20mm wide and deep, cutting back in to the wall slightly.

For sealing the wall/floor joint in a new construction: when designing, foresee an opening situated at the wall/floor joint (20mm x 20mm) to be filled with MASTERSEAL 505.

To repair mortar joints and cracks in masonry wall, or cracks in concrete walls: cut out the defective mortar joints or cracks to a minimum width and depth of 20mm. Undercut if possible.

For holes, patches, honeycomb and other construction faults in concrete walls: Remove all tie wires, wood or foreign objects by cutting back the concrete from the surface to a depth of 25 mm.

For anchoring bolts or metal posts in concrete or masonry*: Drill a hole deep enough to secure the bolt or post properly and large enough so there is at least 10mm on all the sides of it. Alternatively consider CONGRESIVE 1418 for anchoring.

Flush out holes, joints or cracks with water to remove all loose particles and dust. All surfaces must be dampened with clear water immediately prior to the application of MASTERSEAL 505.

Mixing instructions

MASTERSEAL 505 can be mixed with either a clean rod or gloved hand to the desired consistency. Mix only the quantity which can be used immediately. Do not re-temper.

Mix MASTERSEAL 505 powder with water in the ratio 3.5: 1 by volume.

Application

For plugging active leaks: form a plug of the material in the gloved hand until slight setting occurs. Then press the plug firmly into the opening; exert full pressure, without moving the hand. Hold in place for approximately 60 seconds. If the opening is too big to be closed with 1 mix of MASTERSEAL 505, work progressively from the sides to the middle, following the above procedure. After set, but not completely hardened, trim off excess material in order to create a uniform level with the surrounding surfaces by removing from centre to sides.

For sealing the wall/floor joint in an existing construction: Fill the opening with MASTERSEAL 505 mortar, force in to place forming a cove.

For sealing the wall/floor joint in a new construction: Fill the rebate with MASTERSEAL 505 mortar, force in to place forming a cove.

To repair mortar joints and cracks in masonry wall, or cracks in concrete walls: Trowel or press into the joint.

For holes, patches, honeycomb and other construction faults in concrete walls: Fill all holes, patches honeycombing and other construction faults.

For anchoring bolts or metal posts in concrete or masonry*: Fill the hole with a putty-like consistent mortar and tamp it down so that the entire hole is full. Immediately centre the bolt or post over the hole and force it into the MASTERSEAL 505 mortar. Tamp the mortar firmly around the bolt or post.

Curing

Once the placed MASTERSEAL 505 mortar has stiffened sufficiently, dampen with clean water and maintain in a damp condition for a minimum of 15 minutes.

Equipment care

Clean tools and equipment IMMEDIATELY after use with water. Hardened MASTERSEAL 505 can only be removed mechanically.

Storage and Shelf life

Store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates the

product must be stored in an air-conditioned environment.

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 please consult BASF's Technical Services Department.

Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). 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. MSDS available on demand or on BASF construction chemicals web site.

Note

All BASF Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue.

Field services where provided, does not constitute supervisory responsibility, for additional information contact your local BASF representative.

Disclaimer

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the competence of any labour involved in the application are beyond our control.

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