

# MasterSeal 590

**Special mortar with ultra quick setting for the instant closing of water leaks.**

## DEFINITION OF THE MATERIAL

MasterSeal 590 is a powder product ready-for-use made with special cement and fine aggregate base (0.63 mm). Mixed with water, it creates an ultra-fast setting mortar.



## MAIN FIELDS OF APPLICATION

MasterSeal 590 is effective for:

- immediately blocking water leaks, including pressurised, in concrete and masonry constructions;
- sealing the wall-floor slab joint in basements before applying MasterSeal 581;
- previous concrete castings of concrete structures with the elimination of discontinuity and possible water seepage, before waterproofing with MasterSeal 581;
- repairing surface cracks and defects on concrete structures;
- quick anchoring of bolts, anchor rods, etc.

## CHARACTERISTICS

MasterSeal 590 is characterised by:

- ultra-fast setting: sealing, even in the presence of water, has immediate effect (setting completed after 2-3 minutes at 20°C);
- ultra rapid development of mechanical resistances (compressive strength after 30 minutes > 12 MPa, 24 hours > 30 MPa and 28 days > 50 MPa);
- dimensional stability: MasterSeal 590 mortar is not subject to shrinkage or detaching due to variations in temperature;
- water-proofing: the high mechanical resistance guarantees the duration of the work for the entire life span of the structure, without any decrease of the initial characteristics;
- absence of chlorides: does not contain aggressive salts for the reinforcements;
- easy to use: it only requires mixing with water, no special tools or skilled labour required;
- after about 30 minutes MasterSeal 590 can be

coated with the waterproofing products of the MasterSeal line.

## CONSUMPTION

1 kg of MasterSeal 590 fills a volume of about 0.6 litres, which is equivalent to a joint with a 2 cm x 2 cm cross-section and 1.45 m long.

## PACKAGE

25 kg drums and 5 kg cans.

## STORAGE

Store the material in the original containers, in a dry and covered place at a temperature between 15 and 25°C. Do not expose to direct sunlight.

## APPLICATION SHEET

### TEMPERATURE

It can be applied when the ambient temperature is between +5°C and +40°C.

### PREPARING THE SUBSTRATE

The substrate must be clean, clear of any dust, debris or any other substance that could jeopardise the adhesion of MasterSeal 590 mortar.

Clean preferably with pressurised water. Immediately prior to application, wet the substrate well.

Prepare the area being restored so that the edges are cut at right angles or dovetail. The size of the groove must not be smaller than 1.5-2 cm.

### MIXING

Place only the amount of MasterSeal 590 required for a single application in a recipient. Add approximately 25% water, the equivalent of 1.25 litres for 5 kg of MasterSeal 590.

Mix quickly until you achieve a smooth and malleable mixture. Avoid mixing more MasterSeal 590 than you will be using in 2-3 minutes. Do not re-mix.

### CLOSING WATER SEEPAGE

Open the hole or crack so that it is at least 2 cm wide and 2 cm deep. The edges must be cut and the section must be a right angle or dovetail, avoiding V finishes.

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Prepare MasterSeal 590 by using a trowel to mix it and working the mixture by hand until it is no longer sticky. Apply immediately. Press MasterSeal 590 mortar firmly into the crack/hole and hold it in position until it sets, i.e. until it starts heating up. Keep your hand still for this duration of time.

If the crack/hole is too big to be sealed in a single operation, repeat application several times, starting from the edges and working towards the centre.

When it is set, and prior to hardening, remove any excess mortar, then leave to harden.



## SEALING THE WALL-FLOOR SLAB JOINT OF AN EXISTING CONSTRUCTION

Prepare the joint by creating a square-section groove along the entire perimeter, no larger than 2 x 2 cm. Prepare MasterSeal 590 mortar and immediately apply it with a round-tip trowel.

## ANCHORING BOLTS AND METAL PROFILES

Prepare a suitable hole to fit the bolt or profile, so that it has a clearance of at least 1 cm in every direction. Prepare MasterSeal 590 mortar and apply until the hole is completely full. Immediately put in the bolt or metal profile. Level it by removing any excess mortar and leave to harden. Do not apply forces to the bolt or profile for at least 5 hours after completing installation.

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## FLEXIBLE PIPE-STRUCTURE SEAL

Create a groove of a few centimetres around the pipe. Apply the first layer of MasterSeal 590 on the bottom of the groove, creating a pipe-structure connection.

Apply a layer of MasterSeal 910 hydro-expansive mastic, insulated on both sides with non-adhesive tape. Complete and finish with MasterSeal 590.

## HARDENING

In normal weather conditions MasterSeal 590 mortar requires approximately 30 min to harden. With large sizes (wall-floor slab joints) we recommend using wet cloths or water spray to keep the application wet.

## ADVICE AND PRECAUTIONS

- The application of MasterSeal 590 in cracks or wall-floor slab joints must not exceed dimensions of 30 mm in width and 25 mm in depth;
- do not apply MasterSeal 590 to frozen substrates, if the temperature is below 5°C or if it is expected to drop below 5°C within the next 24 hours;
- At high temperatures use cold water or even ice to delay setting.

## DECLARATION OF PERFORMANCE (DoP) and CE MARKING

In compliance with European Regulations (EU No 305/2011 and EU No. 574/2014), the product features the CE marking according to UNI EN 998/1 and with the relevant DoP (Declaration of Performance).

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Since 16/12/1992, BASF Construction Chemicals Italia Spa has been operating under a Certified Quality System in compliance with UNI EN ISO 9001. Furthermore, the Environmental Management System is certified according to UNI EN ISO 14001 and the Safety Management System is certified according to OHSAS 18001.

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This edition supersedes all previous ones.

March 2020