



The Chemical Company

# MasterSeal® 501

## Cement Based Capillary Crystalline Waterproofing Material

### Description of Product

**MasterSeal® 501**, is a cement based capillary crystalline waterproofing material that is applied against surface waters in old and new structures from negative and positive directions.

### Complies with EN 1504-2

### Fields of Application

- Interior and exterior areas for vertical and horizontal applications.
- Waterproofing of foundations and curtain walls.
- Water tanks.
- Tunnels.
- Elevator pits.
- Supporting walls, dams and harbors.

### Features and Benefits

- Easy to prepare and apply.

- Applied by brush.
- Long working time.
- **MasterSeal® 501** fills the capillary gaps by forming permanent (insoluble) crystals and enables water impermeability.
- Protects concrete.
- Resistant to negative and positive water pressure.
- Water vapor permeable.
- Resistant to freeze-thaw cycle.

### Application Procedure

### Preparation of Substrate

Application substrate must be dry, sound mainly smooth, clean and fine pored, free from honey combs, voids, cracks, ridges, dust, tar, pitch forming oil, old paint and other bond breaking residues. Wooden or iron wedges must be removed from the surfaces and active water leakages must be prevented with **MasterSeal® 591**. Voids and hollows must be filled with

### Technical Data

Material	Mineral Fillers, Polymer Modified Additives and Special Cement	
Color	Grey	KR
Substrate Temperature	+5°C +30°C	
Service Temperature	-20°C +80°C	
Maturity Period	3 - 5 minutes	
Pot Life	20 minutes	

Obtained in +23°C, 50% relative humidity conditions. Higher temperatures decrease the time, lower temperatures increase the time.





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**MasterSeal® 591, Emaco® R 356 or MasterEmaco® S 488.** On vertical and horizontal corners fillet with min. 4 cm radius must be applied. Substrate must be dampened before application. If the coating loses its water rapidly, this means that substrate is not dampened enough. For the applications in hot and windy environment, only for the first coat, mixing water can be increased 10% at the recommended mixing water ratio.

## Mixing

**MasterSeal® 501** powder in a clean mixing container. Add recommended amount of water while mixing with a 400-600 RPM mixer at least for 3-5 minutes until a homogenous and uniform mixture is obtained. After waiting for 3-5 minutes, mix again for approximately 30 seconds and it becomes ready to use.

## Mixing Ratios

MasterSeal® 501	Brush
Amount of Mixture	6.00 liters
Density of Mixture	2.00 kg/liter

## Application Method

Apply **MasterSeal® 501** with brush on the dampened substrate. When the first layer sufficiently cured apply the second coat. This period may change between 3 to 5 hours depending on environmental temperature. Application period between each layer must be less than 6 hours.

## Curing

After **MasterSeal® 501** application, material must be protected from losing its water rapidly.

Do not use curing compounds. **MasterSeal® 501** must be kept wet for 5-7 days. In water tanks, 24 hours after **MasterSeal® 501** application, water tank must be filled with water to increase crystal formation period and penetration depth.

## Coverage

First Coat : 1.00 kg/m<sup>2</sup> powder product  
Second Coat : 1.00 kg/m<sup>2</sup> powder product

## Watch Points

- Wait for the appropriate ambient and substrate temperature if it is less than 5°C or more than 30°C.
- Do not apply **MasterSeal® 501** under the rain or prediction of rainy weather.
- Application must be protected from direct sun light, wind, frost or rain in 24 hours.
- Working times of cement based systems are affected from environmental and surface temperatures and relative humidity in the air. In low temperatures the reaction slows down and this increases working period and working time. High temperatures accelerate the reaction and the periods stated above decrease depending on this. In order to complete the curing of material, environmental and surface temperatures must not decrease below the minimum allowed temperatures.
- In outer surface applications, the surface has to be protected from sun, wind, frost or rain during the first 24 hours.
- Prepared material must be used in 20 minutes.
- If any coating will be made on **MasterSeal® 501**, consult **BASF Yapi Kimyasallari Sanayi A.Ş.** Technical Service.



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## Cleaning of Tools

All the tools and equipments must be cleaned by water after the application. After **MasterSeal® 501** is hardened, it can only be removed from the surface mechanically.

## Packaging

20 kg polyethylene reinforced kraft bag.

## Storage

Must be stored in unopened original packing, and in cool and dry environment protected from freezing. In short-term storing, maximum 3 palletes can be stowed on top of each other and delivery has to be according to first in first out system. In long-term storing, the palletes must not be stowed on top of each other.

## Shelf Life


12 months after the production date under appropriate storing conditions. Opened packages have to be stored by tightly sealing the bag and must be used in one week.

## Health and Safety Watch Points

Work cloth, protective gloves, goggles and masks concordant with Work and Worker Health rules must be used during the application. Due to irritant effects of the non-cured material, avoid contact to skin and eyes during storing and application. If such a contact occurs, it must be washed by soap and plenty of water. Consult a physician urgently if swallowed. Food and drink must be kept outside the application areas. Must be stored away from children. Please look at the Material Safety Data Sheet for detailed information.

## Disclaimer

The technical information given in this publication is based on the present state of our best scientific and practical knowledge **BASF Yapı Kimyasalları Sanayi A.Ş.** is only responsible for the quality of the product. **BASF Yapı Kimyasalları Sanayi 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 (08/2013).

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<b>BASF Yapı Kimyasalları Sanayi A.Ş.</b> Gebze Organize Sanayi Bölgesi İlhan Dede Cad. 1000 Sok. Gebze-Kocaeli/TÜRKİYE	
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<b>EN 1504-2</b>	
<b>PRODUCTS AND SYSTEMS FOR THE PROTECTION AND REPAIR OF CONCRETE STRUCTURES</b> Coating material, purpose of 1.3 Protection against ingress, 2.2 Moisture control, & 2 Increasing resistivity impregnation and protection against ingress	
Adhesion strength by Pull off test	≥ 1,0 N/mm <sup>2</sup>
Water vapour permeability	Class 1
Capillary absorption and permeability to water	w < 0,1 kg/m <sup>2</sup> .h <sup>0,5</sup>
Permeability to CO <sub>2</sub>	S <sub>p</sub> > 50 m
Reaction to fire	A1
Dangerous substances	Comply with clause 5.4