

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
- 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 **MasterSeal® 591** 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 | Fırça Kullanarak |
|------------------------|-------------------------|
| Mixture Water | 6,00 liter |
| Density of Mixture | 2,00 kg/liter |

APPLICATION

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/m² powder product
 Second Coat: 1.00 kg/m² 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.

TECHNICAL DATA

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|-----------------------|--|---|
| 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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- Application must be protected from direct sun light, wind, frost or rain in 24 hours.
- **MasterSeal® 501** applied in +23°C gains mechanic strenght after 1 day, becomes impermeable to water after 7 days and gains final strength after 14 days.
- 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.
- Prepared material must be used in 20 minutes.
- If any coating will be made on **MasterSeal® 501**, consult **Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.** Technical Service.

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. The material must not be exposed to moisture or water. Pallets must be protected with stretch nylon. 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

6 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 PRECAUTIONS

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. **Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.** is only responsible for the quality of the product. **Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.** 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 INFORMATION

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MasterSeal® 501 Technical Data Sheet -Revision Date: 07/2022

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| Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti. Adres: Barbaros Mah. Begonya Sok. Nidakule Kuzey Ataşehir, C Kapısı No:3 E/5, 34746 Ataşehir İstanbul 20 DOP NO : 04.1504.2.005.1 | |
| EN 1504-2 :2004 MASTERSEAL 501 Beton Yapıların Korunması ve Tamiri İçin Mamuller ve Sistemler. Bölüm:2 Beton için Yüzey Koruma Sistemleri (Products and systems for the protection and repair of concrete structures Part 2: Surface protection systems for concrete) 2.2 Nem Kontrolü 8.2 Nem içeriğini sıfırlayarak direnci artırma amaçlı kaplama malzemesi (Principles: 2.2 Moisture control, 8.2 Increasing resistivity) | |
| Çekip Koparma Deneyi Yoluyla Yapışma Dayanımı (Adhesion strength by pull-off test) | Rijit sistemler Trafik yükü olmadan≥ 1,0 N /mm ² (0,7 min) (Rigid systems Without trafficking:>1,0 N/mm ² (0,7 min) |
| Su Buharı Geçirgenliği (Permeability to water vapour) | Sınıf 1 : SD<5 m (Class 1: SD<5 m) |
| Kapiler Su Emme ve Su Geçirgenliği (Capillary absorption and permeability to water) | NPD |
| Yangına Tepki (Reaction to fire) | A1 |
| Tehlikeli Maddeler (Dangerous substances) | Madde 5.4 'e uygun (Comply with clause 5.4) |