



The Chemical Company

MasterSeal® 589 (Formerly known as THOROSEAL® FX100)

Cement and Acrylic Based Two Components Flexible Waterproofing Coating For Negative-Positive Applications

Description of Product

MasterSeal® 589, is a cement and acrylic based two component flexible waterproofing coating used on concrete surfaces for negative- positive applications.

Complies with EN 1504-2

Fields of Application

- Interior and exterior areas for vertical and horizontal applications.
- Terraces (coating which is grey color should be protected).
- Soft water (pH 3 to 7) tanks used in textile industry.
- Water tanks and swimming pools.
- Elevator pits.
- Wetrooms like WC, bathroom, kitchen, and balcony.

- To protect concrete from water, carbonation and salts.
- Facilities like spa and hamams.

Features and Benefits

- Easy to prepare and apply
- Applied by brush or spraying machine.
- Long working time.
- Resistant to negative and positive water pressure (1 bar negative-1.5 bar positive)
- Water vapor permeable.
- Forms a perfect water impermeable, non-deformable coating under screeds and ceramic tiles with high adhesion performance and flexible structure.
- High durability.
- **MasterSeal® 589** covers cracks up to 0.60 mm when applied as 2 mm thick and up to 1.20 mm when reinforced with waterproofing net.

Technical Data

Material	Mineral Fillers, Polymer Modified Additives and Special Cement	
MasterSeal® 589 Component A	Copolymer Acrylic Dispersion	
MasterSeal® 589 Component B	KR	
Color	Grey, White	
Freeze - Thaw Resistance (ISO/DIS 4846.2)	No Deformation After 50 Cycles	
Adhesion Strength (28 days)	≥ 1.00 N/mm ²	
Resistance to Pressurized Water	1.0 bar (negative), 1.50 bar (positive)	
Capillary Water Absorption (EN 12808-5)	≤ 0.10 g (after 4 hours)	
Substrate Temperature	+5°C +30°C	
Service Temperature	-20°C +80°C	
Maturity Period	3 - 5 minutes	

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





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- Suitable for pedestrian traffic.
- Highly resistant to carbon dioxide ions. Does not crack.
- Resistant to freeze-thaw cycle.
- White color has UV resistant.
- Can be safely used in drinking water tanks (has a test report).

Certified by Hacettepe University Turkish Doping Control Center and Chemical Analysis Laboratory, and consistent with BS 6920 Standard Analysis Report.

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**, **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, extra mixing water can be added without exceeding 10% of the Part B.

Mixing

Pour liquid component B (**MasterSeal® 589**) into a clean mixing container and slowly add powder component A (**MasterSeal® 589**) while mixing with a 400-600 RPM mixer. Continue mixing for at least 3-5 minutes until a homogenous and uniform mixture is obtained.

Wait for 3-5 minutes and mix again for approximately 30 seconds and becomes ready to use.

Mixing Ratios

MasterSeal® 589	Comp. A	Comp. B
Amount of Mixture	25 kg	10 kg
Density of Mixture	1,44 kg/ltr	

Application Method

Prepared **MasterSeal® 589** mixture is applied by Thoro brush or trowel as two or three layers. Brush application direction in each layer must be perpendicular to each other. Waiting period between each layer changes depending on environmental conditions. Reinforcement of **MasterSeal® 589** with waterproofing mash: Apply first coat with Thoro brush and lay down mash on the wet coating. Apply the second coat when the first coat is sufficiently cured and make sure that the mash is covered with **MasterSeal® 589**.

Coverage

First Coat : 1.50 kg/m² mixture
Second Coat : 1.30 kg/m² mixture

Watch Points

- Wait for the appropriate ambient and substrate temperature if it is less than 5°C or more than 30°C. Also application should not be made in very hot, rainy or windy weathers.
- **MasterSeal® 589** applied in +23°C gains mechanic strength after 2 days, becomes impermeable to water after 7 days and gains final strength after 14 days. In exterior surface applications, the surface must be protected from sun, wind, frost or rain during the first



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24 hours.

- Working and reaction time of cement and acrylic based systems are affected by environment and ground temperature and relative humidity in the air. Low temperatures slow down the chemical reaction and increase working period, coating time and work time. Also coverage decreases because viscosity increases. High temperatures accelerate the chemical reaction and times stated above are reduced depending on this. For the material to complete its curing, environment and ground temperatures must not fall down below the minimum allowed value.
- Wet film thickness must not pass 1.30 mm in single layer.
- The surfaces that will be walked on must be covered with screed prepared with admixture plaster **MasterCast® 125** or ceramic tiles. **BASF** tile adhesives are recommended for tiling.

Cleaning of Tools

All the tools and equipments must be cleaned by water after the application. After **MasterSeal® 589** is hardened, it can only be removed from the surface mechanically.

Packaging

Component A: 25 kg polyethylene reinforced kraft bag.
Component B: 10 kg tin.

Storage

Must be stored in unopened original packing and in cool and dry environment protected from freezing. In short-term storing, maximum 3 palettes 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 palettes must not be stowed on top of each other.

Shelf Life

12 months after the production date under appropriate storing conditions. Component B of **MasterSeal® 589** freezes below 0°C. Opened packages have to be stored by tightly sealing the bag/cover 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.



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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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EN 1504-2	
PRODUCTS AND SYSTEMS FOR THE PROTECTION AND REPAIR OF CONCRETE STRUCTURES Coating material, purpose of 1.3 Protection against ingress, 2.2 Moisture control, 8.2 Increasing resistivity impregnation and protection against ingress	
Adhesion strength by Pull off test	$\geq 0,8 \text{ N/mm}^2$
Water vapour permeability	Class I
Capillary absorption and permeability to water	$w < 0,1 \text{ kg/m}^2 \cdot \text{m}^{0,5}$
Permeability to CO ₂	$S_p > 50 \text{ m}$
Reaction to fire	C - s1, d0
Dangerous substances	Comply with clause 5.4