



The Chemical Company

## MASTERSEAL® 525

### Cement and Acrylic Based Dual Component UV Resistant Flexible Water Insulation Material

#### Description of Product

**MASTERSEAL® 525** is a cement and acrylic based dual component water insulation material that forms an effective barrier against salts carried by water and gases in the atmosphere, and is used on concrete and cement based surfaces by applying from the inside or outside.

#### Fields of Application

- In inner and outer areas for vertical and horizontal applications from the direction of coming water.
- In insulation of foundations.
- In supporting walls.
- Grounds that are expected to be deflected.
- In terraces (can be used without protecting the top in under light weights. Consult **BASF Yapı Kimyasalları San. A.S.** Technical Service for details)
- In wet volumes like WC, bathroom, kitchen, and balcony.

- In olympic swimming pools.
- In drinking and other water tanks.
- In facilities like spa and hamams.
- In sea water channels.
- Against salty water where water impermeability and protection is needed.
- To protect concrete surfaces from carbonation and chlorine attacks.
- In walking ways of marinas.
- In insulation of flower gardens.

#### Features and Benefits

- 1 mm thick **MASTERSEAL® 525** gives protection against carbonizing equivalent to over 80 mm concrete.
- Water impermeable, resistant to 7 bars positive water pressure.
- Perfect adhesion property.
- Easy to prepare and apply.
- Applied by brush or spraying machine.

#### Technical Data

Structure of the Material <b>MASTERSEAL® 525</b> Component A <b>MASTERSEAL® 525</b> Component B	Mineral sealant, polymer modified admixtures and special cement Copolymer acrylic dispersion	
Color	White	KR
Adhesion Strength	≥ 1.50 N/mm <sup>2</sup> (28 days)	
Water Penetration (DIN 1048)	7 bar pressure - no leakage (2 mm dry film thickness)	
Capillary Water Absorption (TS EN 12808-5)	≤ 0.10 g (after 4 hours)	
Water Vapor Coefficient	≥ 3,64 x 10 <sup>-4</sup> cm <sup>2</sup> /s	
Chlorine Ion Diffusion (ASTM C 1202)	260 Coulomb	
Chlorine Ion Diffusion Coefficient	1,04 x 10 <sup>-7</sup>	
CO <sub>2</sub> Diffusion Resistance	Sc ≥ 89 cm (1 mm dry film thickness) Sc: concrete thickness equivalent	
Application Ground Temperature	+5°C +25°C	
Service Temperature	-20°C +80°C	
Maturity Period	3 - 5 minutes	
Usage Period	2 hours	

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



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- Long working time.
- Has a white color and resistant to UV rays.
- Suitable for light pedestrian traffic.
- Water vapor permeable.
- High durability.
- Resistant to freezing - thawing cycle.
- Highly resistant to carbon dioxide and chlorine ions.
- Although traditional water insulation materials require 7 - 28 days curing period, **MASTERSEAL® 525** can be applied to 24 hours fresh concrete.
- 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

Cement based surfaces of the structures contacting with water have to be strong, dry, bearing, dustless, clean, and also in balance. Surface must be cleaned off all kinds of oil, grease, rust, and paraffin traces that can weaken adherence and no loose particles must be present. Iron and wooden wedges on the surface have to be removed, and active water leakages and spaces must be filled by **Waterplug®**, **Polifiks®** or **Emaco® S88 C** if present. Corners and sides must be beveled with minimum 4 cm radius bevels. Application surface has to be wetted well and then waited until it becomes wet/dry. If the coating material losses its water rapidly and turns dull, this means the surface is not wetted well or dried rapidly. In these instances where the weather is hot or materials are exposed to wind, mixture water can be increased for 10% of the component B just for the first layer.

### Mixing

Liquid component B (**MASTERSEAL® 525**) is poured into a clean mixing container and powder component A (**MASTERSEAL® 525**) is slowly added to the container and mixed 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, the mixture is mixed again for approximately 30 seconds, and becomes ready to use.

### Mixing Ratios Obtaining Rigid Coating By Mixing With Water

<b>MASTERSEAL® 525</b>	<b>Comp. A</b>	<b>Comp. B</b>
Amount of Mixture	25 kg	8 kg
Density of Mixture	1,80 kg/liter	

### Application Method

Prepared **MASTERSEAL® 525** 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.

### Coverage

Coverage of First Layer : 1.50 kg/m<sup>2</sup> mixture  
Coverage of Second Layer: 1.50 kg/m<sup>2</sup> mixture  
Coverage of Third Layer : 1.00 kg/m<sup>2</sup> mixture

### Watchpoints

- If surface temperature is below +5°C or over +25°C in **MASTERSEAL® 525** application, then suitable temperatures must be waited for. Also application should not be made in very hot, rainy or windy weathers.
- **MASTERSEAL® 525** applied in +23°C gains mechanic strength after 2 days, becomes impermeable to water after 7 days, and gains final strength after 14 days. Higher temperatures decrease the time, lower temperatures increase the time.
- In outer surface applications, the surface has to be protected from sun, wind, frost or rain during the first 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

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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 2 mm in single layer. The application has to be at least two layers.
- **BASF Yapı Kimyasalları San. A.S.** adhesives are recommended for pavements.

## Cleaning of Tools

All the tools and equipments must be cleaned by water after the application. After **MASTERSEAL® 525** is hardened, it can only be removed from the surface mechanically.

## Packaging

Component A : 25 kg polyethylene reinforced kraft bag.  
Component B : 8 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® 525** 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 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

This information given here is true, represents our best knowledge and is based not only on laboratory work, but also on field experience. However, BASF Yapı Kimyasalları San. A.S. is only responsible from the quality of the product. BASF Yapı Kimyasalları San. A.S. cannot be hold responsible from the results caused by applications of the product not in accordance with the written suggestions of how and where to use the product and/or faulty applications. This technical document is valid until a new one is printed and abates the previous editions. 01/2008.

