

# MasterSeal® 525

## Cement and Acrylic Based Two Parts UV Resistant Fully Flexible Waterproofing Material

### DESCRIPTION OF PRODUCT

**MasterSeal® 525**, is a cement and acrylic based two parts waterproofing 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.

**Complies with EN 1504-2**

**Complies with EN 14891**

### FIELDS OF APPLICATION

- Interior and exterior areas for vertical and horizontal applications
- Waterproofing of foundations and curtain walls
- Retaining walls
- Terraces (can be used without protecting the top in under light weights. Consult **Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.** Technical Service for details)
- Wetrooms like WC, bathroom, kitchen and balcony
- Swimming pools
- Drinking and other water tanks
- Facilities like spa and hamams
- Sea water channels
- Against salty water where water impermeability and protection is needed


- To protect concrete surfaces from carbonation and chlorine attacks
- Walking ways of marinas

### FEATURES AND BENEFITS

- 1 mm thick **MasterSeal® 525** gives protection against carbonizing equivalent to over 80 cm concrete.
- Water impermeable, resistant to 7 bars positive water pressure.
- Perfect adhesion property.
- Easy to prepare and apply.
- Applied by brush or spraying machine.
- Long working time.
- White in color and resistant to UV rays.
- Suitable for pedestrian traffic.
- Water vapor permeable.
- High durability.
- Resistant to freeze-thaw cycle.
- Highly resistant to carbon dioxide and chlorine ions.
- Although traditional waterproofing materials require 7-28 days curing period, **MasterSeal® 525** can be applied on green concrete.
- Can be safely used in drinking water tanks (has a test report).

*Chemical Analysis Laboratory and consists with BS 6920 Standard Analysis Report.*

### TECHNICAL DATA

Material <b>MasterSeal® 525 Part A</b> <b>MasterSeal® 525 Part B</b>	Mineral Filler, Polymer Modified Additives and Special Cement Copolymer Acrylic Dispersion	
Color	Off White	KR
Adhesion Strength	≥ 1,50 N/mm <sup>2</sup> (28 days)	
Flexural Strength (EN 196-1)	≥ 3,00 N/mm <sup>2</sup>	
Elasticity Modules (EN 13412)	≥ 2000 N/mm <sup>2</sup>	
Water Penetration (DIN 1048)	7 Bar Pressure No Leakage (2 mm Dry Film Thickness)	
Capillary Water Absorption (TS EN 12808-5)	≤ 0,1 gr (after 4 hours)	
Water Vapor Coefficient	≥ 3,64x10 <sup>-4</sup> cm <sup>2</sup> /s	
Chlorine Ion Diffusion (ASTM C 1202)	260 Coulomb	
Chlorine Ion Diffusion Coefficient	1,04x10 <sup>-7</sup>	
CO <sup>2</sup> Diffusion Resistance	Sc ≥ 89 cm (1 mm dry film thickness) Sc: Concrete Thickness Equivalent	
Substrate Temperature	+5°C +25°C	
Service Temperature	-20°C +80°C	
Maturity Period	3-5 minutes	
Pot Life	2 hours	

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

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### 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, extra mixing water can be added without exceeding 10% of the part B.

#### Mixing

Pour liquid Part B (**MasterSea® 525**) into a clean mixing container and slowly add powder Part A (**MasterSeal® 525**) 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® 525	Part A	Part B
Mixture	25 kg	8 kg
Density of Mixture	1,80 kg/ltr	

### APPLICATION

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

First Coat: 1.50 kg/m<sup>2</sup> mixture  
 Second Coat: 1.50 kg/m<sup>2</sup> mixture  
 Third Coat: 1.00 kg/m<sup>2</sup> mixture

### WATCH POINTS

- Wait for the appropriate ambient and substrate temperature if it is less than 5°C or more than 25°C. 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.
- In exterior surface applications, the surface must 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 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 1.2 mm in single layer.
- The surfaces that will be walked on must be covered with screed or ceramic tiles. **Master Builders Solutions** tile adhesives are recommended for tiling.

### 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

33 kg set  
 Part A: 25 kg polyethylene reinforced kraft bag  
 Part 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 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. Part B of **MasterSeal® 525** freezes below 0oC. 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.

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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. **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® 525 Technical Data Sheet -Revision Date: 01/2023

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EN 1504-2:2004 MasterSeal 525	
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)	
Prensipler : 1.3 Yabancı madde girişine karşı koruma, 2.2 Nem Kontrolü, 8.2 Nem içeriğini sınırlayarak direnci artırma amaçlı kaplama malzemesi (Principles: 1.3 Protection against ingress, 2.2 Moisture control, 8.2 Increasing resistivity)	
CO <sub>2</sub> Geçirgenliği (Permeability to CO <sub>2</sub> )	CO <sub>2</sub> S <sub>D</sub> Geçirgenliği > 50m (CO <sub>2</sub> SD Permeability > 50m)
Su Buharı Geçirgenliği (Permeability to water vapour)	Sınıf I (Class I)
Kapiler Su Emme ve Su Geçirgenliği (Capillary absorption and permeability to water)	w<0,1 kg /m <sup>2</sup> .√h
Çekip Koparma Deneyi Yoluyla Yapışma Dayanımı (Adhesion strength by pull-off test)	Çatlak kapatma veya esnek sistemler Trafik yükü olmadan:≥ 0,8 N/mm <sup>2</sup> (Crack-bridging or flexible systems Without trafficking:>0,8 N/mm <sup>2</sup> (0,5 min)
Yangına karşı tepki (Reaction to fire)	C-s1;d0
Tehlikeli maddeler (Dangerous substances)	Madde 5.4 ' e uygun (Comply with clause 5.4)

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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	
DOP NO: 03.14891.002 EN 14891:2017 MasterSeal 525	
Yapıştırıcılarla tutturulmuş seramik karoların altında kullanım için sıvı halde uygulanan su geçirmez ürünler (Liquid-applied water impermeable products for use beneath ceramic tiling bonded with adhesives)	
CM P:Sıvı uygulanan polimer modifiyeli çimento esaslı su geçirmez ürün , klorlu sulara dayanımı artırılmış (CM P:Cementitious liquid-applied water impermeable product resistant to contact with chlorinated water)	
Başlangıç çekme yapışma mukavemeti (Initial tensile adhesion strength)	≥ 0,5 N / mm <sup>2</sup>
Suya daldırıldıktan sonra çekme yapışma mukavemeti (Tensile adhesion strength after water contact)	≥ 0,5 N / mm <sup>2</sup>
Isıyla yaşlandırıldıktan sonra çekme yapışma mukavemeti (Tensile adhesion strength after heat ageing)	≥ 0,5 N / mm <sup>2</sup>
Donma-çözünme çevrimlerinden sonra çekme yapışma mukavemeti (Tensile adhesion strength after freeze-thaw cycles)	≥ 0,5 N / mm <sup>2</sup>
Kireçli su ile temas ettikten sonra çekme yapışma mukavemeti (Tensile adhesion strength after contact with lime water)	≥ 0,5 N / mm <sup>2</sup>
Su Yalıtım (Waterproofing)	Penetrasyon Yok (No penetration)
Klorlu su ile temas ettikten sonra çekme yapışma mukavemeti (Tensile adhesion strength after contact with chlorinated water)	≥ 0,5 N / mm <sup>2</sup>