

# MasterSeal® 645 (Formerly known as Masterseal® 445)

## Polymer Modified Bitumen Rubber Based, Two Parts Waterproofing Coating

### DESCRIPTION OF PRODUCT

**MasterSeal® 645** is cement and modified bitumen emulsion based, two parts, pasty consistency, high durability waterproofing coating.

Complies with EN 15814

### FIELDS OF APPLICATION

- For vertical and horizontal applications
- For tanking against pressurised water
- For foundations and curtain walls (Tanking)
- For waterproofing of retaining walls
- For bonding of insulation boards. (Perimeter insulation)
- For waterproofing of flowerpots

### FEATURES AND BENEFITS

- Suitable for horizontal and vertical applications.
- Bridges shrinkage cracks with its elastic behaviour.
- Easy to prepare and use.
- Longer pot life for extended workability.
- Resistant to freeze thaw cycle.
- Resistant to bacterial attacks, salts and acids in the soil.
- Easy to apply with trowel and brush.

### 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 surface 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. Priming the substrate with diluted **MasterSeal® 645** mixture is highly recommended.

#### Mixing

Add Part B slowly into Part A (in the plastic pail) while mixing with 400-600 rpm electric drill. Mix at least 3-5 minutes until homogenous, lump free, pasty consistency obtained. Wait for 3-5 minutes and mix again about 30 seconds to make ready for application. Mix as much material as can be applied within the pot life.

#### Mixing Ratios

| MasterSeal® 645    | Part A     | Part B |
|--------------------|------------|--------|
| Mixture Water      | 24 kg      | 8 kg   |
| Density of Mixture | 1,09 kg/lt |        |

### APPLICATION


#### Primer Application

Mix the material as described. Take enough amount of material and dilute 1:3 or 1:5 of water depending on the substrate absorbency. Mix with 400-600 rpm electric drill until lump free, homogenous consistency obtained. Apply equally on the substrate with a brush and do not allow accumulation on horizontal surfaces. Wait until the primer sufficiently cured before the first coat application. Apply **MasterSeal® 645** with trowel or brush with the consumption mentioned on the coverage table.

#### Protection of the Coating

Wait until the waterproofing coating sufficiently cured before backfilling the excavation. **MasterSeal® 645** must be protected from damages during the backfilling with a suitable drainage or heat insulation boards. Sharp stones, rubbles and etc. are not suitable for excavation backfilling.

### TECHNICAL DATA

|  |   |   |
|--|---|---|
| Material<br><b>MasterSeal® 645</b> Part A<br><b>MasterSeal® 645</b> Part B | Rubber and Polymer Modified Bitumen Emulsion Dry mixture of special cement and sand |   |
| Color  | Brown (after drying: black)   | KR  |
| Consistency  | Pasty   |  |
| Density of Mixture   | 1,09 kg/lt  |   |
| Substrate Temperature  | +5°C +30°C  |   |
| Temperature Resistance (after curing)                                      | -20°C +80°C   |   |
| Exposure to Water  | ~48 Hours   |   |
| Open (Working) Time  | ~1 hour   |   |
| Curing Time  | ~24 hours   |   |

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

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#### COVERAGE

| Consumption per m <sup>2</sup> | 32 kg set            |
|--------------------------------|----------------------|
| ~3,00 kg/m <sup>2</sup>        | ~10.6 m <sup>2</sup> |

#### 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® 645** 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 and bitumen emulsion 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 temperature.
- Areas that are not fully cured must not be exposed to water.
- Coating has to be applied on the surfaces of structure or structure parts that contact with water.
- **MasterSeal® 645** must be used within 1 hour after mixing.
- Do not use **MasterSeal® 645** inside the potable water tanks and swimming pools.

#### CLEANING OF TOOLS

Clean the tools and equipments with warm soapy water after the application. Once **MasterSeal® 645** is cured, it can only be mechanically removed from the surface by using a suitable solvent.

#### PACKAGING

32 kg set

Part A: 24 kg plastic bucket

Part B: 8 kg polyethylene bag

#### STORAGE

Store in cool and dry conditions protected from frost. In short-term storage, maximum 2 palletes can be stored on top of each other and delivery must be according to first in first out system. In long-term storage, do not store palletes on top of each other.

#### SHELF LIFE

24 months after the production date under appropriate storing conditions. **MasterSeal® 645** may freeze under 0°C. Tightly seal the cover of the opened pails and do not store more than 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® 645** Technical Data Sheet -Revision Date: 07/2023

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| Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd.<br>Şti.<br>Barbaros Mah. Begonya Sok. Nidakule Kuzey Ataşehir, C Kapısı<br>No:3 E/5, 34746 Ataşehir İstanbul<br>20<br>DOP NO: 03.15814.002<br>EN 15814:2011+A2:2014<br>MasterSeal 645 |  |
| <b>Zemin altı yapılarda binaların su yalıtımı için kullanılan polimer modifiye bitümlü kalın kaplamalar (PMBC)<br/>(Polymer modified bituminous thick coatings (PMBC) used for the waterproofing of buildings in below ground structures)</b>            |  |
| Su Geçirmezlik<br>(Watertightness)   | Sınıf W2-B<br>(Class W2-B)   |
| Çatlak Köprüleme Yeteneği<br>(Crack Bridging Ability)  | Sınıf CB 2<br>(Class CB 2)   |
| Su Dayanımı<br>(Water Resistance)  | Geçti-Suda renklenme yok ve<br>dolgudan ayrılma olmaz<br>(Passed- No colouration of the<br>water<br>and No debonding from inlay) |
| Düşük sıcaklıkta esneklik<br>(Flexibility at Low Temperature)  | Geçti-Çatlak yok<br>(Passed - No cracks)   |
| Yüksek Sıcaklıkta boyutsal kararlılık<br>(Dimensional stability at high<br>temperature)  | Geçti-Kayma veya akıtma yok<br>(Passed-No sliding or draining<br>down)   |
| Su geçirmezliğin dayanıklılığı ve<br>yangına tepki<br>(Durability of watertightness and<br>reaction to fire)   | Geçti<br>(Passed)  |
| Yangına tepki<br>(Reaction to fire)  | E  |