

# MASTERSEAL® 510

*One component, polymer-modified cementitious protective coating*

## DESCRIPTION:

Master Builders MASTERSEAL® 510 is a one component, polymer-modified, cement-based protective coating designed for waterproofing, dampproofing and beautifying concrete, mortar or masonry. MASTERSEAL 510 can be used for both interior and exterior applications.

## RECOMMENDED FOR:

- Newly repaired concrete to provide a uniform color and appearance
- Architectural coating to beautify concrete
- Positive side waterproofing and dampproofing of uncracked concrete
- Vertical and overhead surfaces
- Carbonation protection of concrete

## FEATURES/BENEFITS:

- Waterproofs and dampproofs surfaces
- Attractive, decorative appearance
- Increases resistance to de-icing salts and CO<sub>2</sub>
- Protects concrete surfaces from environmental influences

## PACKAGING/ESTIMATING:

MASTERSEAL 510 is packaged in 55 lb (25 kg) moisture-resistant bags.

One 55 lb (25 kg) bag of MASTERSEAL 510 when mixed with 1.45 gal (5.5 liters) of water will yield approximately 4.00 gal (15.14 L) of mixed material and will cover approximately 200 ft<sup>2</sup> (18.6 m<sup>2</sup>) at 31 mil thickness (first and second coat).

### Coverage Rates -

#### Positive Side Waterproofing

First coat @ 31 mils: 50 ft<sup>2</sup>/gal or 200 ft<sup>2</sup>/unit (1.23 m<sup>2</sup>/L or 18.6 m<sup>2</sup>/unit)

Second coat @ 31 mils: 50 ft<sup>2</sup>/gal or 200 ft<sup>2</sup>/unit (1.23 m<sup>2</sup>/L or 18.6 m<sup>2</sup>/unit)

#### Architectural Finish

Two coats total: 50 ft<sup>2</sup>/gal or 200 ft<sup>2</sup>/unit @ 31 mils (1.23 m<sup>2</sup>/L or 18.6 m<sup>2</sup>/unit)

Maximum application thickness is 1/16 in. (62 mils) per coat. Total application thickness should not exceed 1/8 in. (125 mils). Applications exceeding this rate may result in the formation of small hairline cracks in the coating.

Coverage will depend on color, texture and condition of the substrate and method of application. It is recommended that a controlled test area be installed to ascertain total amount of material needed under jobsite conditions. Apply the second coat after the first has reached initial set [approximately 1 hour @ 70 °F (21 °C)].

## PERFORMANCE DATA<sup>1</sup>:

<b>Working Time</b>	30 minutes @ 70 °F (21 °C)
<b>Recoat Time</b>	Allow 2 hour minimum between coats
<b>Flexural Strength</b> (ASTM C 348)	<b>Avg. psi (MPa)</b>
1 Day	250 (1.7)
7 Day	400 (2.8)
28 Day	700 (4.8)
<b>Splitting Tensile Strength</b> (ASTM C 496)	<b>Avg. psi (MPa)</b>
1 Day	150 (1.7)
7 Day	225 (1.6)
28 Day	400 (2.8)
<b>Elcometer Adhesion</b> (ASTM D 4541)	100% cohesive failure (0% bond loss)
<b>Thermal Compatibility</b> (ASTM C 884)	5 Cycles, no delamination
<b>U.V. Resistance</b>	No yellowing after 1000 cycles
<b>Water Vapor Transmission</b> 7 Day (ASTM E 96)	grains/hr/ft <sup>2</sup> (g/hr/m <sup>2</sup> ) 9.50 (6.65)
<b>Hydrostatic Pressure Test</b> (Fed. Spec. TT-P-14411A)	positive
Coverage:	50 ft <sup>2</sup> /gal (1.23 m <sup>2</sup> /L)
Water Leakage:	None
Softening:	None
Delamination:	None

<sup>1</sup>The data shown is based on controlled laboratory tests of air cured samples. Reasonable variations from the results shown may be experienced as a result of atmospheric and jobsite conditions. Mix entire bag of MASTERSEAL 510 when preparing specimens for strength tests.

***The following information regarding surface preparation, mixing, application and curing is provided as a brief overview. For detailed instructions before use of this product, reference the MASTERSEAL 510 Installation Bulletin.***

## SURFACE PREPARATION:

Remove all deteriorated concrete. Substrate should be free of all oil, dirt and contaminants. The surface should be roughened by mechanical methods such as sandblasting, waterblasting, shotblasting or other suitable means. Areas deeper than 1/8 in. (125 mils) should be repaired prior to the application of MASTERSEAL 510. Contact your local Master Builders representative for repair product information.

Pre-wet the surface with clean water to a saturated surface dry condition (SSD) without standing water. Dense surfaces should be pre-wetted for several hours prior to application. Maintain surface dampness until coating is applied.

## MIXING:

### Recommended Mix Ratios

Brush Applications:	1.15 to 1.45 gal/55 lb bag (4.35 to 5.49 L/25 kg bag)
Trowel Applications:	0.95 to 1.25 gal/55 lb bag (3.60 to 4.73 L/25 kg bag)
Spray Applications:	1.45 to 1.65 gal/55 lb bag (5.49 to 6.24 L/25 kg bag)

Mechanically mix with a slow speed drill (400 to 600 RPM) and a Jiffier-type paddle or in an appropriate size mortar mixer. Pour approximately 90% of the mix water into the mixing container; then add the bagged material while continuing to mix. Mix for 3 to 5 minutes, adding remaining water as needed.

## APPLICATION:

MASTERSEAL 510 should only be applied over properly prepared, pre-dampened surfaces by means of a stiff brush, broom, trowel or spray equipment.

### Trowel and Brush Applications -

When MASTERSEAL 510 is applied by hand trowelling or brush, the recommended thickness per coat is approximately 31 mils depending on expected water pressure and substrate profile. The required performance is achieved by applying two coats.

### Spray Applications -

For large areas MASTERSEAL 510 can be applied using a hopper gun, carousel pump or Moyna screw type low pressure spraying machine as commonly used for plastering.

## CURING:

In instances where the coating will be subjected to continuous contact with water, it is necessary to wet cure the surface using wet burlap, burleen or fog spray for three days, followed by two days of air drying prior to being placed into service. Wet curing should only be done when surface can no longer be marred by a brush or when coating has sufficiently hardened. Protect new applications from rain, strong wind and intense sunlight.

## LIMITATIONS:

- Maximum application thickness is 1/16 in. (62 mils) per coat. Total application thickness should not exceed 1/8 in. (125 mils). Applications exceeding this rate may result in the formation of small hairline cracks in the coating.
- Substrate must be saturated surface dry (SSD) at time of application. Dense concrete surfaces should be pre-wetted several hours prior to the application of the coating. Keep surface damp until coating is applied.
- Do not apply coating when rain is expected.
- MASTERSEAL 510 must be mixed to a uniform consistency, without lumps (3 minutes minimum). **Do Not Over Mix** (5 minutes maximum).
- Do not use more than recommended amount of water.
- Recommended maximum ambient and substrate temperature range is between 45 °F and 90 °F (7 °C and 32 °C) at time of application.
- Coating may show water marks and chalking due to weather.
- Coating may exhibit slight color variation due to uneven drying.
- Working time is reduced at temperatures above 75 °F (24 °C). Keep material out of sunlight and only mix quantity which can be placed within working time.
- Waterproofing properties can only be achieved if product is applied on positive pressure side or on non-cracked substrates.

## RELATED BULLETINS:

Material Safety Data Sheet — MASTERSEAL 510  
Specification Bulletin 7S49 — MASTERSEAL 510  
Installation Bulletin 7149 — MASTERSEAL 510

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