

MasterSeal 554

Flexible Cementitious Waterproof Coating.

DESCRIPTION

MasterSeal[®] 554 is a read-to-use cement-base coating modified with polymers. It is employed to protect and waterproof concrete, mortar and masonry surfaces requiring waterproofing both on the water-exposed surface (positive side), as well as the water-opposite surface (negative side). It may be applied with a low-pressure spraying system or with a trowel by hand.

PACKAGING

32 kg (70 lb.) kits.

Component A: 6.6 L (1.75 gal) buckets.

Component B: 25 kg (55 lb.) moisture-proof bags.

COLORS

Gray, pale white

YIELD

One kit will yield approximately a final mix of 15.14 L (4 gal) that will approximately cover 20.4 m² (220 ft²) with a film thickness of 0.8 mm (31 mils).

First Layer: 0.8 mm (31 mils) 1.35 m²/L or 20.4 m²/unit (55 ft² or 220 ft²/unit).

Second Layer: 0.8 mm (31 mils) 1.35 m²/L or 20.4 m²/unit (55 ft² or 220 ft²/unit). Yield will depend on the surface conditions and application method. It is recommended to have a controlled test area to ensure the quantity of material required under normal site conditions. Apply the second layer once the first one has set.

SHELF LIFE

1 year if properly stored.

STORAGE

Store in closed original containers in a dry and clean place, at a temperature between 7 to 32 °C (45 to 90 °F). Avoid freezing.

COV CONTENT

0 g/l or 0 lb./gal, minus water and exempt from solvents.

PRODUCT HIGHLIGHTS

- Flexible – It adjusts to thermal movements and vibrations.
- It withstands hydrostatic positive and negative pressures, and it can be used to waterproof low-level ground surfaces.
- It protects against carbonation and environmental contaminants; it extends service life of structures.
- It is shipped in pre-packaged, easy-to-mix and easy-to-apply units.
- Very low permeability – It withstands moisture and chloride intrusion.
- Appealing appearance – it can be used as decorative coating.
- Applied by spraying – It reduces labor.

RECOMMENDED USES

- For waterproofing of water-exposed surface and water-opposite surface sides (positive and negative sides).
- On new or repaired concrete to give uniform color and appearance.
- For decorative coatings.
- Vertical and overhead surfaces.
- Horizontal surfaces for light traffic.
- Indoors and outdoors.
- Concrete, mortar and masonry surfaces.

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TECHNICAL DATA

MasterSeal[®] 554 is a patented blend consisting of cement, polymers, graded aggregates and admixtures.

Typical Properties

Property	Value
Workable Time, at 21 °C (70 °F)	30 min
Curing Time between Layers, at 21 °C (70 °F)	1 to 2 h

Test Results

Property	Results	Test Method
Bond Strength, with elcometer, % bond failure	100% (0% bond)	ASTM D 4541
Thermal Compatibility, 5 Cycles	With no Delamination	ASTM D 884
UV Ray Resistance	Slight Yellowing	ASTM D 822
Elongation, 28 Days Maximum	20%	ASTM D 638
Hydrostatic Positive and Negative Side Pressure Test, Yield 1.35 m ² /l (55 ft ² /gal)		Federal Spec. TT-P-14411A
	Negative Side	Positive Side
	4 psi (9 ft)	20 psi (46 ft)
Water Leaks	None	None
Softening	None	None
Delamination	None	None

These data are based on controlled-lab tests using our samples cured at room temperature. Reasonable variations may be expected with regards to these results as a consequence of atmospheric and site conditions. Blend the full MasterSeal[®] 554 kit when preparing samples for performance tests.

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MODE OF APPLICATION

Surface Preparation

1. Remove all damaged concrete. Substrate shall be structurally sound, fully cured, clean and free from oil, earth and contaminants.
2. Before applying MasterSeal[®] 554, fill and repair any damaged area more than 3 mm (1/8 in) in depth. Contact your Master Builders Solutions Sales Rep for information on repair products.
3. Abrade the surface using some mechanical means such as: sanding, water jet, sandblasting or another appropriate means until a minimum preparation of the concrete surface of 4 (CSP 4) is achieved following ICRI's guide No. 03732. Do not use a surface preparation method causing cracks on concrete. Verify that no micro cracking or blistering are present in accordance to the guide above.
4. Perfectly saturate the surface with water until reaching a Saturated Surface-Dry (SSD) condition before applying the coating. High-thickness concrete surfaces shall be pre-dampen for several hours before application. Keep surface moisture until the coating is applied.

Mixing

1. Mix mechanically using a drill-type manual stirrer (at 400 - 600 rpm) equipped with a cement mixing rod or an appropriate-size mortar mixer.
2. Pour approximately 80% of Component A (liquid polymer) in the mixing container; then, gradually add Component B (powder), while continue stirring until getting a homogenous blend without lumps. Mix from 3 to 5 minutes.
3. Depending on the application, add the rest of Component A as needed to get the appropriate consistency.
4. In order to extend the life of the mixture or the application time, cool Component A at no less than 10 °C

(50 °F) and keep Component B in an area away from direct sunlight before mixing.

Application

Brush or trowel application.

1. The powder to liquid polymer ratio is 25 kg (55 lb.) of powder per every 5.2 L (1.5 gal) of liquid polymer.
2. Apply two layers in cross-sectional fashion (one in vertical direction and one in horizontal direction) to get the required performance. See the Yield Section to get information on application techniques. Use a soft-bristle brush or a sponge trowel in between layers to level the surface. The first layer shall be done making the coat to be integrated on the surface ensuring all voids and cavities are filled.
3. To waterproof, gently pass a broom or brush to texturize the floor. Apply the second layer in a period from 2 to 4 hours or as soon as the surface can be worked on with a trowel.
4. For applications as a base for MasterProtect[®] coating, apply by troweling the first layer until reaching a smooth finish. Depending on ambient conditions, the final layer can be applied from 1 to 2 hours after the first one, so the first layer does not get tarnished when troweling. If MasterSeal[®] 554 is to remain exposed for a long period of time, carefully clean the surface before the finish application.

Applications with spraying or squeegee

1. The mixture ratio is 25 kg (55 lb.) of powder to 6.6 L (1.75 gal) of liquid polymer.
2. For larger areas, MasterSeal[®] 554 can be applied using a pump or a screw-type spraying equipment or a low pressure carousel (gun with hopper-type loading container) using a nozzle of appropriate diameter (0.6 mm [¼ in]) as it would normally be used for masonry applications.

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Curing time

1. MasterSeal[®] 554 only requires to be cured at room temperature.
2. When the coating is subject to continuous water contact, it is necessary to wet cure the surface for three days, followed by ambient-temperature drying for four days before opening the surface to service.
3. Protect freshly treated surfaces from rain, strong winds and intense solar light during 24 hours.

CLEANING

Clean all tools and equipment with water immediately after using them. Cured material may be removed by mechanical means.

FOR BEST RESULTS

- Pre-condition these materials 24 hours before using at approximately 21 °C (70 °F)
- Total thickness of coating is 3.2 mm (1/8 in) or 125 mils. Maximum thickness per layer is 1.6 mm (1/16 in) or 62 mils. Applications exceeding these ranges may result in coating performance failure.
- Perform a site test to determine the total amount you will need under the specific site conditions.
- Apply material in two layers to avoid delamination and cracking.
- Minimum ambient temperature and surface temperature shall be 7 °C (45 °F) and higher at the time of application.
- Do not apply coating when surface temperature is 32 °C (90 °F) or higher.
- MasterSeal[®] 554 shall be mixed until it has a uniform constancy without lumps (minimum 3 minutes). Do not mix excessively (maximum 5 minutes).
- Only apply on a dry substrate, and on Saturated Surface-Dry (SSD) condition which is clean, sound and previously and appropriately prepared.

- Do not apply the coating when rain is expected in the following 24 hours.
- MasterSeal[®] 554 shall not be subject to concentrated loads on one point (for example, furniture) and heavy traffic.
- Do not use for crack bridging.
- Appropriate application of product is the user's responsibility. All field visits by Master Builders Solutions personnel is exclusively intended to make technical recommendations and supervision or providing quality control on the site.

SAFETY

Read, understand and follow all Material Safety Data Sheet (MSDS) and product label information prior to use. The MSDS can be obtained by requesting it from your Master Builders Solutions Sales Representative. In case of spills, leakages, fire, exposure or accidents, CALL SET-IQ DAY OR NIGHT OR DAY **800-00-214-00** or **55-59-15-88** (Mexico City). **KEEP OUT OF REACH OF CHILDREN! FOR PROFESSIONAL USE, NOT FOR SALE FOR THE GENERAL PUBLIC.**

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