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Portland Cement
Plaster

MasterSeal[®] 583

Waterproof cement-based coating for concrete

FORMERLY SUPER THOROSEAL[®]

PACKAGING

35 lb (15.9 kg) pail
7 lb (3.18 kg) can

COLOR

White

YIELD

In above ground exterior walls
exposed to rain and standing water:

First coat:
0.22 lb/ft² (1.07 kg/m²)
160 ft² per 35 lb pail
32 ft² per 7 lb can

Second coat:
0.11 lb/ft² (0.54 kg/m²)
320 ft² per 35 lb pail
64 ft² per 7 lb can

Yield of the mixed product will depend on the texture and porosity of the surface. For application on treads of the joints, it is recommended to trowel the area beforehand.

STORAGE

Store in unopened containers and keep in a clean, dry condition protected from rain, dew and humidity.

SHELF LIFE

The average shelf life is 1 year.

VOC CONTENT

0 g/L

DESCRIPTION

MasterSeal 583 is a dry portland cement-based modified polymer coating, providing a semi-smooth waterproofing finish that resists both positive and negative hydrostatic pressure.

PRODUCT HIGHLIGHTS

- Cement-based
- Modified with powder acrylic resin
- Compatible with mineral or cement-based substrates
- One component
- Resists both positive and negative hydrostatic pressure load

BENEFITS

- Waterproof, seals and protects
- Easy and fast application
- Add only water
- Prevents development of mold and mildew
- Provides resistance from acid rain
- Protects reinforcing steel

APPLICATIONS

- Diverse building substrates
- Walls
- Foundations
- Tunnels
- Basements
- Blocks, bricks, stone and concrete
- Concrete
- High tanks
- Interior and exterior

HOW TO APPLY

SURFACE PREPARATION

1. Adhesion of the material is affected by mechanical and chemical factors, for which the surface to be treated should be free of loose particles, grease and dust. The best method of removing any paints, oils, grease, curing compounds or any other contaminants is through high-pressure water-blasting.
2. Roughen or brush-blast extremely smooth or glazed surfaces to ensure good mechanical adhesion through mechanical abrasion or by chemical processing to promote the adhesion.
3. Completely dampen the substrate with water before application starts
4. An adhesion field test should be conducted, applying a small amount of the material and allowing a minimum of 7 days to cure.

MIXING

1. Mix only with potable water
2. MasterSeal® 583 may be mixed manually or mechanically with a slow-speed (400-600 rpm) 3/4" drill and mixing paddle. For high volume applications, use an adequate size mixer.
3. Utilize a ratio of 5.5 quarts of clean water per 35 lb (15.9 kg) pail.
4. Allow the mixture of MasterSeal 583 with water to rest undisturbed for approximately 10 minutes. Pot life of the mix is between 30 and 40 minutes, depending on temperature and relative humidity.

APPLICATION

1. Do not apply MasterSeal 583 when the room temperature or the substrate temperature are under 41°F (5°C), or when the temperature within the following 24 hours of the application is going to be under 41°F (5°C).
2. MasterSeal 583 is applied by brush, broom or traditional mortar spraying equipment. It is recommended that the first coat is applied with a brush to work it thoroughly into the substrate to completely fill and cover all voids, holes and non-moving cracks.

FIRST COAT OR PRIMING COAT

1. Completely dampen the substrate with water before application starts to avoid premature setting of MasterSeal 583. Do not saturate the substrate, but keep it cool and damp throughout the application. If the surface to cover dries quickly or if the material over the substrate starts to drag, dampen the substrate again. Do not dilute the mixed material under any circumstance.

2. In its first coat, MasterSeal 583 should be applied at 0.22 lb/ft² (1.07 kg/m²).
3. When MasterSeal 583 is applied in negative hydrostatics pressure situations during the job, the first coat should be finished with vertical brush movements. This will allow detection of small active voids that can be treated afterwards with MasterSeal® 590 before applying the second coat of MasterSeal 583.
4. In any other case, the first coat of MasterSeal 583 should be finished with horizontal movements.
5. Under normal conditions, the second coat can be applied after 6 hours of the first coat

SECOND COAT

1. The first coat should be dampened before initiating the application of the second coat, avoiding any standing water in the surface. For best performance use a low-pressure hose that can atomize the water. If MasterSeal 583 is applied in closed or badly ventilated areas, condensation of water may occur in the curing phase of the first coat. In that case, any standing water has to be removed from the surface.
2. If MasterSeal 583 is applied by brush or broom in the first coat, the second coat requires back brushing (perpendicular direction to the first coat) to achieve a good and uniform coating.
3. The second coat should be applied at 0.11 lb/ft² (0.54 kg/m²).

CURING

1. In a dry environment, once the initial setting of MasterSeal 583 has started, the area must be sprayed or maintained damp. This operation should be carried out with care to avoid inconsistencies of color.
2. In cold, humid or poorly ventilated environments, curing time may be longer and forced ventilation may be necessary to avoid condensation.
3. Heat pump dehumidifiers should not be used during the first 28 days following the application.
4. Protect the applied surface from rain until it has cured.

SPECIFIC APPLICATION

In above ground exterior walls exposed to rain and standing water, yield of a MasterSeal 583 bag is the following:

1. First coat: 0.22 lb/ft² (1.07 kg/m²)
 2. Second coat: 0.11 lb/ft² (0.54 kg/m²)
- Yield of the mixed product will depend on the texture and porosity of the surface. For application on treads of the joints, it is recommended to trowel the area beforehand.

CLEANING

Clean all tools and equipment immediately after their use with plenty of water. Cured material may only be removed by mechanical means.

FOR BEST PERFORMANCE

- Do not retemper the material.
- Do not apply over frozen or frosted surfaces.
- MasterSeal 583 should not be applied when active hydrostatic water is moving through the substrate or voids.
- Patch all holes and cracks with MasterSeal 590 before applying MasterSeal 583.
- If negative hydrostatic pressure is present it may be required to apply two coats at 60/ft².
- If there are sulfate crystals in the substrate or there is any concern that the substrate may have sulfates (e.g. in treatment of construction materials made from clay), check with your authorized distributor for applicability of the product's usage.
- Make certain the most current versions of product data sheets are being used.
- The adequate application of the product is responsibility of the user. Field visits by Master Builders Solutions personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Material Safety Data Sheets and product label information for this product prior to use. The MSDS can be obtained by visiting www.master-builders-solutions.com/en-us, e-mailing your request to mbsbcst@mbcc-group.com or calling 1(800)433-9517. Use only as directed.

IN CASE OF EMERGENCY: Call CHEMTEL +1 (800) 255-3924 or if outside the US or Canada, +1 (813) 248-0585.

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Technical Data

Composition

MasterSeal 583 contains cement, graded sand, and proprietary additives.

Test Data

PROPERTY	RESULTS	TEST METHOD
Initial Set, hr, at 70 °F (21 °C), 50% rh	3	ASTM C266
Final Set, hr, at 70 °F (21 °C), 50% rh	4.25	ASTM C266
Density, (cured), lbs/ft ³ (kg/m ³)	125 (2,002)	Lab Method
Positive resistance to hydrostatic pressure	72.5 psi No leakage	ISO 13007-5
Negative resistance to hydrostatic pressure	10 psi	Lab Method
Compressive strength, psi (MPa) 7 days 28 days	4,200 (29) 6,500 (45)	ASTM C 109
Adhesion strength, psi (MPa)	>350	Test by tensile bond
Permeance, perms (metric permeability) g/24hr/m ²	9.8	Lab Method

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.