BUILDING TRUST

PRODUCT DATA SHEET

Sika Thoroseal® Plus

(formerly MSeal 583)

WATERPROOF CEMENT-BASED COATING FOR CONCRETE

DESCRIPTION

Sika Thoroseal® Plus is a dry Portland cement-based modified polymer coating, provides a semi-smooth waterproofing finish that resists both positive and negative hydrostatic pressure.

USES

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

CHARACTERISTICS / ADVANTAGES

- 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 the development of mold and mildew
- Provides resistance from acid rain
- Protects reinforcing steel

PRODUCT INFORMATION

Chemical Base	Contains cement, graded sand, and proprietary additives.	
Packaging	35 lb (15.9 kg) pail 7 lb (3.18 kg) can	
Appearance / Colour	White	
Shelf Life	The average shelf life is 1 year.	
Storage Conditions	Store in unopened containers and keep in a clean, dry condition protected from rain, dew and humidity	
Density	125 lbs/ft^3 (2,002 kg/m^3) when cured	(Lab Method)

TECHNICAL INFORMATION

Compressive Strength	7 days 28 days	4,200 psi (29 MPa) 6,500 psi (45 MPa)	(ASTM C 109)
Tensile Adhesion Strength	>350 psi		(Test by tensile bond)
Water Penetration Under Pressure	**Positive resistance to hydrostatic pressure** 72.5 psi, no leakage		(ISO 13007-5)
Water Penetration Under Negative Pressure	**Negative resistance to hydrostatic pressure** 10 psi		(Lab Method)
Water permeability	9.8 perms		(Lab Method(metric permeability [g/24hr/m2]))

APPLICATION INFORMATION

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 The 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.
Initial Set Time	3 hrs at 70 °F (21 °C), 50% rh (ASTM C266)
Final Set Time	4.25 hrs at 70 °F (21 °C), 50% rh (ASTM C266)

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet (MSDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

NOTES ON INSTALLATION

- Do not retemper the material.
- Do not apply over frozen or frosted surfaces.
- Sika Thoroseal® Plus should not be applied when active hydrostatic water is moving through the substrate or voids.
- Patch all holes and cracks with SikaSet® Waterplug before applying Sika Thoroseal® Plus.
- 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 the treatment of construction materials made from clay), check with your authorized distributor for the 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 the responsibility of the user. Field visits by Sika personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

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. Sika Thoroseal® Plus may be mixed manually or mechanically with a slow-speed (400-600 rpm) 3/4" drill and mixing paddle. For high-volume applica-

tions, 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 Sika Thoroseal® Plus with water to rest undisturbed for approximately 10 minutes. The pot life of the mix is between 30 and 40 minutes, depending on temperature and relative humidity.

APPLICATION

1. Do not apply Sika Thoroseal® Plus when the room temperature or the substrate temperature is 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. Sika Thoroseal® Plus 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 the application starts to avoid premature setting of Sika Thoroseal® Plus. 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, Sika Thoroseal® Plus should be applied at 0.22 lb/ft² (1.07 kg/m²).
3. When Sika Thoroseal® Plus is applied in negative hydrostatics pressure situations during the job, the first coat should be finished with vertical brush movements. This will allow the detection of small active voids that can be treated afterward with SikaSet® Waterplug before applying the second coat of Sika Thoroseal® Plus.
4. In any other case, the first coat of Sika Thoroseal® Plus should be finished with horizontal movements.
5. Under normal conditions, the second coat

Second Coat

1. The first coat should be dampened before initiating the application of the second coat, avoiding any standing water on the surface. For best performance use a low-pressure hose that can atomize the water. If Sika Thoroseal® Plus 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 Sika Thoroseal® Plus 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).

APPLICATION METHOD / TOOLS

In above-ground exterior walls exposed to rain and standing water, the yield of a Sika Thoroseal® Plus 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)
3. The 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.

CURING TREATMENT

1. In a dry environment, once the initial setting of Sika Thoroseal® Plus 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.

CLEANING OF TOOLS

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

LEGAL NOTES

apt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

SIKA HONGKONG LTD.
Rm.1507-12, Blk A, New Trade Plaza,
6 On Ping Street, Shatin, N.T., H.K.
Phone: +852 26868108
Fax: +852 26453671
Mail: marketing@hk.sika.com
Website: www.sika.com.hk