



The Chemical Company

PRODUCT DATA

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Cementitious Waterproofing

THOROSEAL® 550i

Flexible, cementitious waterproofing compound and protective coating

Description

Thoroseal® 550i is a ready-to-use polymer-modified cement-based coating. It is used to waterproof and protect concrete, mortar, and masonry surfaces requiring either positive- or negative-side waterproofing. Thoroseal® 550i can be applied by low-pressure spraying or hand troweling.

Yield

One unit consisting of 1.75 gallons (6.6 L) of liquid polymer (Part A) and 55 lbs (25 kg) of powder (Part B), which will yield approximately 4 gallons (15.14 L) of mixed material, which will cover approximately 220 ft² (20.4 m²) at 31 mils thickness.

First and second coats, each at 31 mils: 55 ft²/gallon or 220 ft²/unit (1.35 m²/L or 20.4 m²/unit)

Coverage will depend on the condition of the surface and method of application.

Packaging

70 lbs (32 kg) units containing: Part A, packaged in 1.75 gallon (6.6 L) pails, and Part B, packaged in 55 lb (25 kg) multi-wall bags

Color

Gray and off white

Features

- Flexible
- Resists negative and positive hydrostatic pressure
- Excellent resistance to de-icing salts
- Protects against carbonation and pollutants
- Prepackaged units
- Low permeability
- Attractive appearance
- Sprayable

Benefits

- Accommodates thermal movements and vibrations
- Can be used to waterproof below grade
- Ideal for cold, wet environments
- Lengthens the service life of structures
- Easy mixing and application
- Resists moisture and chloride intrusion
- Can be used as a decorative coating
- Reduces labor requirements

Shelf Life

1 year when properly stored.

Storage

Store in unopened containers in a clean, dry area between 45 and 90° F (7 and 32° C). Protect from freezing.

Where to Use

APPLICATION

- For positive- and negative-side waterproofing
- Providing uniform color and appearance to new and repaired concrete
- As a decorative coating
- As a waterproof base coat for the Sonoshield DC series

LOCATION

- Vertical and overhead surfaces
- Light-duty horizontal surfaces
- Interior and exterior

SUBSTRATE

- Concrete, mortar, and masonry surfaces

How to Apply

Surface Preparation

1. Remove all deteriorated concrete. Substrate should be structurally sound, fully cured, clean, and free of all oil, dirt and contaminants.
2. Fill, repair, and level any damaged areas deeper than 1/8" (3 mm) before applying Thoroseal® 550i. Contact your local BASF representative for information on repair products.
3. Roughen the surface by mechanical methods such as sandblasting, waterblasting, shotblasting, or other suitable means to a minimum CSP 4 following ICRI guideline No. 03732. Do not use a method of surface preparation that will fracture the concrete. Verify the absence of microcracking or bruising in accordance with ICRI Guideline No. 03732.
4. Pre-wet the surface with clean water to a saturated surface-dry (SSD) condition. Pre-wet dense surfaces for several hours before application. Maintain surface dampness until coating is applied.



Technical Data

Composition

Thoroseal® 550i is a proprietary blend of cement, polymer, graded aggregate, and additives.

Typical Properties

PROPERTY	VALUE
Working time , min, at 70° F (21° C)	30
Minimum recoat time , hrs, at 70° F (21° C)	1 – 2

Test Data

PROPERTY	RESULTS	TEST METHODS
Elcometer adhesion , % cohesive failure	100 (0% bond loss)	ASTM D 4541
Thermal compatibility , 5 cycles	No delamination	ASTM C 884
UV resistance	Yellows slightly	ASTM D 822
Elongation , % max, at 28 days	20	ASTM D 638
Hydrostatic pressure test, positive and negative side Coverage rate: 55 ft ² /gal (1.35 m ² /L)		Fed. Spec. TT-P-14411A
	Negative side, 4 psi (9 ft)	Positive side, 20 psi (46 ft)
Water leakage	None	None
Softening	None	None
Delamination	None	None

The data shown are based on controlled laboratory tests of air cured samples. Expect reasonable variations from the results shown as a result of atmospheric and jobsite conditions. Mix entire unit of Thoroseal® 550i when preparing specimens for performance tests.

Mixing

- Mechanically mix with a heavy-duty drill (400 – 600 rpm) and a Jiffy or similar paddle with a “mud” blade. An appropriately sized mortar mixer may also be used.
- Pour approximately 80% of Part A (liquid polymer) into the mixing container; then slowly add Part B (powder) and stir for 3 – 5 minutes until a homogeneous, lump-free mixture is obtained.
- Depending on application, add remaining Part A as required for proper consistency.
- To extend working time, chill Part A to no less than 50° F (10° C) and keep Part B in a shaded area before mixing.

Application

TROWEL AND BRUSH APPLICATIONS

The mix ratio is 55 lbs (25 kg) of powder to 1.5 gallons (5.2 L) of liquid polymer.

- Apply 2 coats at cross directions (1 vertical, 1 horizontal) to obtain the required performance. See the coverage section for information on application techniques. Use a smoothing brush or sponge float between each layer to level the surface. Scrub the first coat into the surface to ensure filling of any voids and bug holes.
- For waterproofing, lightly backbroom or brush the first coat to impart texture. Apply the second coat within 2 – 4 hours or as soon as the surface cannot be marred with a trowel.

- For base-coating under Sonoshield DC coatings, trowel the first coat to a smooth finish. Depending upon ambient conditions, the topcoat may be applied as soon as 1 – 2 hours or as soon as the first coat cannot be marred with a trowel; if the Thoroseal® 550i will remain exposed for a prolonged period, clean it thoroughly before topcoating.

SPRAY AND SQUEEGEE APPLICATIONS

- The mix ratio is 55 lbs (25 kg) of powder to 1.75 gallons (6.6 L) of liquid polymer.
- For large areas, apply Thoroseal® 550i with a Moyno, carousel, or screw-type low-pressure spraying machine (hopper gun). Use a suitable spray nozzle (1/4” tip) similar to those commonly used for plastering.

Curing

- Under normal conditions, Thoroseal® 550i requires only air curing.
- In applications where the coating must withstand continuous water contact, moist-cure the surface for 3 days, followed by 4 days of air drying, before placing it into service.
- Protect fresh applications from rain, strong wind, and intense sunlight for 24 hours.

Clean Up

Clean all tools and equipment with water immediately after use. Cured material must be removed mechanically.

For Best Performance

- Precondition these materials to approximately 70° F (21° C) for 24 hours before using.
- The total application thickness is 1/8” (125 mils). Maximum layer thickness is 1/16” (62 mils). Applications exceeding these rates may result in performance failure of the coating.
- Conduct a controlled test to determine the total amount of material needed under jobsite conditions.
- Apply material in 2 layers to prevent sagging or cracking.
- The minimum ambient and surface temperatures should be 45° F (7° C) and rising at the time of application.
- Do not apply coating when surface temperature is 90° F (32° C) and above.
- Thoroseal® 550i must be mixed to a uniform consistency without lumps (3 minutes minimum). Do not overmix (5 minutes maximum).
- Apply only on a clean, sound, properly prepared saturated surface-dry (SSD) substrate.
- Do not apply coating when rain is expected within 24 hours following application.
- Not recommended for use in swimming pools as the first coating.
- Thoroseal® 550i should not be subjected to sharp, concentrated point loads (e.g., furniture) and heavy traffic.

- Do not use for crack bridging.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

THOROSEAL® 550I PART A

Caution

Thoroseal® 550i Part A contains no hazardous chemicals as defined by 29 CFR 1910.1200.

Risks

May cause skin, eye or respiratory irritation. Ingestion may cause irritation.

Precautions

Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep container closed when not in use. DO NOT take internally. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state and local regulations.

First Aid

KEEP OUT OF THE REACH OF CHILDREN. In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product does not knowingly contain materials listed by the state of California as known to cause cancer, birth defects, or other reproductive harm.

VOC Content

0 lbs/gal or 0 g/L, less water and exempt solvents.

THOROSEAL® 550I PART B

Warning!

Warning: contains silica, crystalline quartz, cement, titanium dioxide.

Risks

Eye irritant. Skin irritant. Causes burns. Lung irritant. May cause delayed lung injury.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. Avoid contact with eyes. Wear suitable protective eyewear. Avoid prolonged or repeated contact with skin. Wear suitable gloves. Wear suitable protective clothing. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. Wash soiled clothing before reuse.

First Aid

Wash exposed skin with soap and water. Flush eyes with large quantities of water. If breathing is difficult, move person to fresh air.

Waste Disposal Method

This product when discarded or disposed of is not listed as a hazardous waste in federal regulations. Dispose of in a landfill in accordance with local regulations.

For additional information on personal protective equipment, first aid, and emergency procedures, refer to the product Material Safety Data Sheet (MSDS) on the job site or contact the company at the address or phone numbers given below.

Proposition 65

This product contains materials listed by the state of California as known to cause cancer, birth defects, or reproductive harm.

VOC Content

0 lbs/gal or 0 g/L, less water and exempt solvents.

**For medical emergencies only,
call ChemTrec (1-800-424-9300).**

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