BUILDING TRUST

PRODUCT DATA SHEET

Sika Thorocoat®-400

(formerly MProtect HB 400)

WATER-BASED, HIGH-BUILD, 100% ACRYLIC WATERPROOF COATING

PRODUCT DESCRIPTION

Sika Thorocoat®-400 is a water-based, high-build, 100% acrylic waterproof coating for above-grade concrete, masonry, stucco, and EIFS.

USES

- Exterior
- Vertical and overhead surfaces
- Above-grade
- Protecting and waterproofing

Substrates

- Concrete
- Masonry
- Cement plaster
- Stucco
- EIFS
- Existing Coatings

CHARACTERISTICS / ADVANTAGES

- Available in a broad range of colors and textures for design versatility
- Resists wind-driven rain, helps prevent water penetration into the substrate
- Breathable to allow water vapor to escape
- Excellent adhesion, bonds securely to substrate for long-term durability
- UV resistance provides excellent color retention for a long-lasting attractive finish
- Excellent hiding power
- Textured formulations help improve the aesthetics of irregular substrates
- Effective carbon dioxide diffusion barrier protects embedded steel from corrosion
- Freeze/thaw resistant, suitable for cold climates
- Low VOC content for broad compliance across all regions

APPROVALS / STANDARDS

- Alberta Transportation - Type 3 sealer

PRODUCT INFORMATION

Packaging	5 gallon (18.9 L) pails	
Shelf Life	24 months when properly stored	
Storage Conditions	Store in unopened containers in a clean, dry area. Keep from freezing	
Density	11.4–12.4 lbs/gal (1.37–1.49 kg/L)	(ASTM D 1475)
Flash Point	> 200 °F (93 °C)	(ASTM D 56 Tag Closed Tester)
Viscosity	102-110 KU	(ASTM D 562 (Stormer))

Solid content by mass	56.2%	(ASTM D 5201)
Solid content by volume	38%	(ASTM D 5201)

TECHNICAL INFORMATION

Impact Strength	Passed at 30 in-lbs	(ASTM D 2794)
Resistance to Weathering	**Accelerated Weathering** Passes, 5,000 hours	(ASTM G 23, Type D)
	Chalking Passes, 5,000 hours	(ASTM D 4214)
	Sand Abrasion Resistance Passed at 3,000 L	(ASTM D 968 Method A)
Natural Weathering	**Dirt Pick-Up** 92.02%; passed after 6 months of exposure	(ASTM D 3719)
Microbiological Resistance	**Fungus Resistance** No growth, it meets the requirement	(ASTM D 3273)
	Mildew Resistance Aspergillus oryzae, 7 days: No growth Aspergillus niger, 21 days: No growth	(Fed Spec. TT-P-29 (Fed. Std. 141, Method 6152 and 6271.1))
	Algae Resistance No growth	(ASTM D 5589)
Permeability to Water Vapor	23 perms	(ASTM D 1653)
Carbonation Resistance	**Carbon-dioxide diffusion** / **Results** R (equivalent air-layer thickness), ft (m): 1,318 (402) Sc (equivalent concrete thickness),in (cm): 39 (100)	(PR EN 1062-6)
Lap Shear Strength	R (equivalent air-layer thickness), ft (m): 1,318 (402) Sc (equivalent concrete thickness), in (cm): 39 (100)	(PR EN 1062-6)
Freeze-Thaw Stability	Passed, 50 cycles	(DOT Method A and B)
Salt spray resistance	Passed, 300 hrs	(ASTM B 117)
Water resistance	Meets requirement: no blistering, loss of adhesion, or discoloration	(TT-C-555B)
Low Temperature Bend	No cracking, 1” mandrel	(ASTM D 522)
Reaction to Fire	Flame Spread: 1 Smoke: 4 Fuel Contribution: 7	(ASTM E 84)

Resistance to wind-driven rain	Meets requirement – no water penetration	(TT-C-555B)
Light fastness of colour pigments	Passes, 5,000 hours	(ASTM D 1729)

APPLICATION INFORMATION

Coverage

Texture	Rate, ft²/gal/coat (m²/L)	Wet Film, mils (mm)	Dry Film, mils (mm)
Smooth Recoat	75–125 (1.84–2.45)	22–13 (0.559–0.33)	8–5 (0.203–0.127)
Smooth	75–100 (1.84–2.46)	22–16 (0.559–0.406)	8–6 (0.203–0.152)

*Coverages are estimates for smooth, dense concrete. Coverages will vary on porous or textured surfaces.

Drying Time

Times assume 70 °F (21 °C) and 50% relative humidity.
To touch: 1–2 hours
To recoat: minimum of 6 hours
Lower surface or air temperatures and higher relative humidity will extend the drying time.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

- Do not apply when the substrate or ambient temperature is 40 °F (4 °C) or below or is expected to fall below 40 °F (4 °C) within 24 hours after application.
- Do not apply if rain is expected within 24 hours of application.
- Not for immersion service.
- Apply a 4 by 4 ft (1.2 by 1.2 m) test area to verify acceptable color, texture, and adhesion before proceeding with any project. The test method for measuring adhesion is ASTM D 3359, Measuring Adhesion by Tape Method A. On the 0–5 scale, a minimum adhesion rating of 4A is required.
- Color formulas containing organic colorants are susceptible to fading in exterior applications. Refer to Technical Support for guidance.
- Do not thin the material.
- For professional use only; not for sale to or use by the general public.
- Make certain the most current versions of the product data sheet and SDS are being used.
- For horizontal applications, please contact your local Sika representative.
- Proper application 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.

SUBSTRATE PREPARATION

1. Surfaces should be clean and sound and free of all bond-inhibiting contaminants.
2. Concrete substrates should be fully cured.
3. Repair any holes, spalled and damaged concrete with appropriate Sika repair materials. Allow appropriate cure time prior to coating.
4. Remove any protruding concrete accessories and smooth out any surface irregularities.
5. High-pressure power wash surface (or abrasive blast on hard, dense surfaces) to create a profile of SP 3, per ICRI Guide 310.2.
6. Some stains may require chemical removal. Neutralize any cleaning compounds used and rinse with clean water.
7. Check the adhesion of old coatings according to ASTM D 3359, Measuring Adhesion by Tape Test Method A.
8. Remove any blisters or delaminated areas and sand edges to smooth rough areas and provide a transition to old paint areas.
9. Treat cracks greater than 1⁄32" with Sika Thorocoat®-746 Knife Grade or SikaWall® FL 748. Treat cracks larger than 1/4” as expansion joints and fill with appropriate Sika sealant.
10. New CMU must have a base coat of Sika Thorocoat®-749 Block Filler.

MIXING

1. Prior to use, mix Sika Thorocoat®-400 at a slow speed with a drill and mixing paddle to ensure uniform color and aggregate disbursement and to minimize air entrapment.
2. In multi-pail applications, mix the contents of each new pail into the partially used previous pail to ensure color consistency and smooth transitions from pail to pail.

APPLICATION

1. Sika Thorocoat®-400 is meant to be applied as a two-coat system, achieving a total dry-film thickness (DFT) of 12–16 mils (0.3 mm–0.4 mm). For re-coat applications one coat applied at 11–5 mils (0.279–0.127) DFT.
2. Apply Sika Thorocoat®-400 by brush, spray, roller, or spray-and-backroll.
3. Maintain proper uniform wet-film thickness (WFT) during application to ensure the performance characteristics desired (see yield rates section).
4. Always work to a natural break and maintain a wet edge during application.
5. For uniformity of color and texture, application techniques must be consistent throughout the project.
6. For horizontal applications, please contact your local Sika representative.

Roller

1. Use a quality ¾"– 1-1/4" nap roller cover.
2. Completely saturate the roller and keep it loaded with the coating to build the required mils. Never dry roll.
3. Cross roll, maintaining a wet edge, to achieve uniform thickness. Backroll in one direction for a consistent appearance.

Spray

1. Equipment is available for spraying all grades of Sika Thorocoat®-400. For fine and coarse textures, it is necessary to use a heavy-duty sprayer designed for the application of coatings that contain sand particles. Contact the equipment manufacturer for further recommendations.
2. For smooth and fine grades, backrolling in one direction after spray application is recommended to achieve uniform texture and film thickness.

Brush

1. Application by brush is recommended only for small inaccessible areas, e.g., on touch-ups.
2. Use only a nylon brush.

CLEANING OF TOOLS

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

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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