



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 designed for application on above-grade concrete, masonry, stucco, and EIFS.

WHERE TO USE

- 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 colours and textures for design versatility
- Resists wind-driven rain, helps prevent water penetration into the substrate
- Breathable to allow water vapour to escape
- Excellent adhesion, bonds securely to substrate for long-term durability
- UV resistance provides excellent colour 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

APPROVALS / CERTIFICATES

- Alberta Transportation - Type 3 sealer

PRODUCT INFORMATION

Packaging	18.9 L (5 US gal.) pails
Colour	Available in a broad range of colours and textures for design versatility
Shelf Life	24 months when properly stored in original, unopened packaging
Storage Conditions	Store in unopened containers in a clean, dry area. Keep from freezing
Density	1.37–1.49 kg/L (11.4–12.4 lb/US gal.) (ASTM D1475)
Flash Point	93 °C (> 200 °F) (ASTM D56 Tag Closed Tester)

Viscosity	102-110 KU	(ASTM D562 (Stormer))
Solid content by weight	56.2 %	(ASTM D5201)
Solid content by volume	38 %	(ASTM D5201)

TECHNICAL INFORMATION

Resistance to Impact	Passes, at 30 in-lb	(ASTM D2794)	
Resistance to Weathering	Accelerated Weathering Passes, 5000 hours	(ASTM G23, Type D)	
	Chalking Passes, 5000 hours	(ASTM D4214)	
	Sand Abrasion Resistance Passed at 3000 L	(ASTM D968 Method A)	
Natural Weathering	Dirt Pick-up 92.02 %; passes (after 6 months of exposure)	(ASTM D3719)	
Microbiological Resistance	Fungus Resistance No growth, it meets the requirement	(ASTM D3273)	
	Mildew Resistance <u>Aspergillus oryzae, 7 days</u> <u>No growth</u> <u>Aspergillus niger, 21 days</u> <u>No growth</u>	(Fed Spec. TT-P-29 (Fed. Std. 141, Method 6152 and 6271.1))	
	Algae Resistance No growth	(ASTM D5589)	
	Permeability to Water Vapour	23 perms	(ASTM D1653)
Diffusion resistance to carbon dioxide	R (equivalent air-layer thickness), m (ft)	402 (1,318)	(PR EN 1062-6)
	Sc (equivalent concrete thickness), cm (in)	100 (39)	
Freeze thaw resistance	Passes, 50 cycles	(DOT Method A and B)	
Salt Spray Resistance	Passes, 300 hours	(ASTM B117)	
Water Resistance	Meets requirement: no blistering, loss of adhesion, or discolouration	(TT-C-555B)	
Low Temperature Flexibility	No cracking, 1 in mandrel	(ASTM D522)	
Reaction to Fire	<u>Flame Spread</u>	<u>1</u>	(ASTM E84)
	<u>Smoke</u>	<u>4</u>	
	<u>Fuel Contribution</u>	<u>7</u>	
Resistance to wind-driven rain	Meets requirement – no water penetration	(TT-C-555B)	
Light fastness of colour pigments	Passes, 5000 hours	(ASTM D1729)	

APPLICATION INFORMATION

Yield	Texture	Rate per coat: m ² /L (ft ² /US gal.)	Wet Film, mm (mil)	Dry Film, mm (mil)
	Smooth recoat	1.84–2.45 (75–125)	0.559–0.33 (22–13)	0.203–0.127 (8–5)
	Smooth	1.84–2.46 (75–100)	0.559–0.406 (22–16)	0.203–0.152 (8–6)

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

Waiting Time / Overcoating

6 hours minimum before recoating

Drying time

1–2 hours (dry to touch)

Note: Lower surface or air temperatures and higher relative humidity will extend the drying time.

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

Product properties tested at 21 °C (70 °F) and 50 % R.H. unless stated otherwise.

LIMITATIONS

For professional use only; not for sale to or use by the general public. Proper application of the product is the responsibility of the user. Make sure that the most recent versions of the product and safety data sheets are used. 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.

- Do not apply when the substrate or ambient temperature is 4 °C (40 °F) or below or is expected to fall below 4 °C (40 °F) within 24 hours after application.
- Do not apply if rain is expected within 24 hours of application.
- Product is not designed for immersion service.
- Colour formulas containing organic colourants are susceptible to fading in exterior applications. Contact Sika Canada Technical Support for guidance
- For horizontal applications, please contact your local Sika Technical Sales Representative.
- Do not thin this product. The addition of thinners (ex.: water, solvent, etc.) will slow cure and reduce ultimate properties of this product. The use of thinners will void any applicable Sika warranty.

ENVIRONMENT, HEALTH & SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-

related data.

APPLICATION INSTRUCTIONS

Apply a 1.2 x 1.2 m (4 x 4 ft) test area to verify acceptable colour, texture, and adhesion before proceeding with any project. The test method for measuring adhesion is ASTM D3359, Measuring Adhesion by Tape Method A. On the 0–5 scale, a minimum adhesion rating of 4A is required.

SUBSTRATE PREPARATION

Surfaces should be clean and sound and free of all bond-inhibiting contaminants. Concrete substrates should be fully cured. Repair any holes, spalled and damaged concrete with appropriate Sika® repair materials. Allow appropriate cure time prior to coating. Remove any protruding concrete accessories and smooth out any surface irregularities. High-pressure power wash surface (or abrasive blast on hard, dense surfaces) to create a profile of SP 3, per ICRI Guide 310.2. Some stains may require chemical removal. Neutralize any cleaning compounds used and rinse with clean water. Check the adhesion of old coatings according to ASTM D3359, Measuring Adhesion by Tape Test Method A. Remove any blisters or delaminated areas and sand edges to smooth rough areas and provide a transition to old paint areas. Treat cracks greater than 0.8 mm (1/32 in) with Sika Thorocoat®-746 Knife Grade or SikaWall® FL 748. Treat cracks larger than 6 mm (1/4 in) as expansion joints and fill with appropriate Sika sealant. New CMU must be treated with a base coat of Sika Thorocoat®-749 Block Filler.

MIXING

Mix Sika Thorocoat®-400 at a slow speed with a drill fitted with an appropriate mixing paddle to ensure colour uniformity, aggregate distribution in the coating and to minimize air entrapment. In multi-pail applications, mix the contents of each new pail into the partially used previous pail to ensure colour consistency and smooth transitions from pail to pail.

APPLICATION

Sika Thorocoat®-400 is designed to be applied as a two-coat system, achieving a total dry-film thickness (d.f.t.) of 0.3–0.4 mm (12–16 mil). For re-coat applications, one coat is applied at 0.279–0.127 mm (11– 5 mil) d.f.t.

Apply Sika Thorocoat®-400 by brush, spray, roller, or spray-and-backroll. Maintain proper uniform wet-film thickness (w.f.t.) during application to ensure the performance characteristics desired (see yield rates section). Always work to a natural break and maintain a wet edge during application. For uniformity of colour and texture, application techniques must be consistent throughout the project. For horizontal applications, contact your local Sika Technical Sales Representative.

Roller

Use a quality 19–31 mm (¾ –1-1/4 in) nap roller cover. Completely saturate the roller and keep it loaded with the coating to build the required thickness. Never dry roll. Cross roll, maintaining a wet edge, to achieve uniform thickness. Backroll in one direction for a consistent appearance.

Spray

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. For smooth and fine grades, backrolling in one direction after spray application is recommended to achieve uniform texture and film thickness.

Brush

Application by brush is recommended only for small inaccessible areas or for small touch-ups. Use only a nylon brush.

CLEAN UP

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

LEGAL NOTES

The information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on

Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: www.sika.ca

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Product Data Sheet

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