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Coatings for
Concrete and Masonry

MasterProtect® HB 400DOT

Water-based, high-build, 100% acrylic waterproof coating for DOT applications

FORMERLY THOROCCOAT® DOT

PACKAGING

5 gallon (18.9 L) pails

YIELD

60–80 ft²/gal (1.5–2.0 m²/L) per coat
when applied on porous substrates

80–100 ft²/gal (2.0–2.5 m²/L) per coat
when applied on dense substrates

Master Builders Solutions always recommends applying a test area to determine actual coverage. Apply in an unstretched, uniform manner.

STORAGE

Store in unopened containers in a clean, dry area. Keep from freezing.

SHELF LIFE

18 months when properly stored

VOC CONTENT

Less than 100 g/L
less water and exempt solvents

DESCRIPTION

MasterProtect HB 400DOT is a water-based, high-build, 100% acrylic waterproof coating for above-grade concrete, masonry, stucco and EIFS.

PRODUCT HIGHLIGHTS

- Available in custom state DOT colors
- 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
- Fine texture helps improve 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

APPLICATIONS

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

SUBSTRATES

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

HOW TO APPLY

SURFACE 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 Master Builders Solutions 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 adhesion of old coatings according to ASTM D 3359, Measuring Adhesion by Tape Test Method A.

Technical Data

Composition

MasterProtect HB 400DOT contains water, acrylic emulsion, fillers, and other proprietary ingredients.

Test Data

PROPERTY	RESULTS	TEST METHOD
Density, lbs/gal (kg/L)	13.6 (1.63)	ASTM D 1475
Solids, %		ASTM D 5201
By weight	68.7	
By volume	49.1	
Viscosity, KU	117–125	ASTM D 562 (Stormer)
Accelerated weathering, 5,000 hrs	Passes	ASTM G 23, Type D
Wind-driven rain	Passes	TT-C-555B
Water-vapor permeance, perms	13	ASTM D 1653
Salt spray resistance, 300 hrs	Passes	ASTM B 117
Adhesion to mineral substrates	Passes	ASTM D 3359
Flexibility, 1" mandrel	Passes	FL DOT Section 400-15.2.6.7g
Abrasion resistance, at 3,000 L	Passed	FTMS 141a, Method 6191
Impact resistance, N/m	2.7; passed	FTMS 141a, Method 6191
Freeze/thaw resistance, 50 cycles	Passed	FL DOT Section 400-15.2.6.7a
Fungus-growth resistance	Passes	TT-P-29g
Thermal cycling, 20 cycles	Passed	ICBO Method, modified

All application and performance values are typical for the material when applied in 2 coats at 16 mils total DFT. Performance values may differ due to variations in test methods, conditions, and configurations.

8. Remove any blisters or delaminated areas and sand edges to smooth rough areas and provide transition to old paint areas.
9. Treat cracks greater than $\frac{1}{32}$ " with MasterProtect FL 746 or MasterProtect FL 748. Treat cracks larger than $\frac{1}{4}$ " as expansion joints and fill with appropriate Master Builders Solutions sealant.
10. New CMU must have a base coat of MasterProtect FL 749.

MIXING

1. Prior to use, mix MasterProtect HB 400DOT at slow speed with 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. MasterProtect HB 400DOT is meant to be applied as a two-coat system, achieving a total dry-film thickness (DFT) of 12–16 mils (0.3–0.4 mm).
2. Apply MasterProtect HB 400DOT 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.

ROLLER

1. Use a quality $\frac{3}{4}$ –1 $\frac{1}{4}$ " 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 consistent appearance.

SPRAY

1. Equipment is available for spraying MasterProtect HB 400DOT. Use a heavy-duty sprayer designed for the application of coatings that contain sand particles. Contact equipment manufacturer for further recommendations.
2. 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.

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.

CLEAN UP

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

FOR BEST PERFORMANCE

- Do not apply when 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.
- Not intended for use as a horizontal traffic-bearing coating.
- 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 product data sheet and SDS are being used; visit www.master-builders-solutions.com/en-us to verify the most current versions.
- Proper application is the 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 Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting www.master-builders-solutions.com/en-us, e-mailing your request to mbsbscst@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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