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Technical Data Guide

MASTER® BUILDERS SOLUTIONS

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Water Repellents

MasterProtect® H 1000

High-performance, clear, breathable, 100% silane penetrating sealer

FORMERLY HYDROZO® 100

PACKAGING
– 5 gallon (18.9 L) pails
– 55 gallon (208 L) drums

COLOR
Clear

YIELD
250–400 ft²/gallon (6–10 m²/L)

Coverage may vary greatly with porosity of the substrate; extreme porous substrate may require two coats. Perform test panels to ensure desired results and coverage rates.

STORAGE
Store in unopened containers in a clean, dry area between 35 and 110 °F (2 and 43 °C). Keep from freezing.

SHELF LIFE
18 months when properly stored

VOC CONTENT
Less than 350 g/L less water and exempt solvents

DESCRIPTION
MasterProtect H 1000 is a clear, breathable, high-performance, 100% silane, water repellent sealer that achieves highest depth of penetration.

PRODUCT HIGHLIGHTS
- No masking of windows necessary and requires no cleaning after application
- No residue, will not harm glass windows, metal frames, or painted surfaces
- 100% silane
- Protects against chloride ion / salt penetration
- Excellent depth of penetration
- Breathability allows interior moisture to escape without damaging sealer
- Solvent based, excellent for cold weather applications
- Protects the structure from damage caused by wind-driven rain
- Does not alter surface appearance
- Surface sealer helps reduce efflorescence, atmospheric staining, and mildew
- Superior water repellence so it penetrates deeply and chemically reacts within the pores of concrete to provide long-lasting protection
- Abrasion resistant so it provides long-lasting protection to horizontal substrates subject to traffic, such as bridge decks and highway surfaces

APPLICATIONS
- Interior and exterior
- Horizontal and vertical
- Above grade
- Traffic-bearing concrete substrates
- Bridge decks and substructures
- Concrete highway surfaces
- Ramps and barrier rails
- Parking garages
- Buildings
- Stadiums
- Many other reinforced concrete structures

SUBSTRATES
- Concrete
- Brick and masonry
- Stucco

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Composition

MasterProtect H 1000 is 100% silane by weight.

Compliances

- Alberta DOT, Type 1c

Typical Properties

PROPERTY	VALUE
Penetration, in (mm), average depth, depending upon substrate	0.35 (9)
Surface appearance after application	Unchanged

Test Data

PROPERTY	RESULTS	TEST METHOD
Flash point, °F (°C)	165 (62.7)	SETA
Water repellency after heavy abrasion, %	83.5 – exceeds criteria	Alberta DOT penetrating sealer, Type 1c (0.35 w/c ratio)
Water weight gain, % reduction		NCHRP 244
250 ft^2/gal (6.1 m^2/L)	90	Series II-cube test
400 ft^2/gal (9.8 m^2/L)	85	
Absorbed chloride / salt, % reduction		NCHRP 244
250 ft^2/gal (6.1 m^2/L)	96	Series II-cube test
400 ft^2/gal (9.8 m^2/L)	87	
Absorbed chloride / salt, % reduction	98 – exceeds criteria	NCHRP 244 Series IV - Southern climate
Skid Resistance, BPN		
Broomed Concrete		
Untreated	90	ASTM E 303
Treated	90	
Water penetration of masonry, % Reduction		
Facing Brick		
Dampness	100	ASTM E 514
Leakage	100	
Water Exclusion, %		
Brick	99	ASTM D 6532
Concrete	90	
Water Absorption, %		
Brick	0.05	ASTM D 6532
Concrete	0.96	
Water Vapor Transmission		
WVT (grains/h/ft^2)	2.0	ASTM D 6490
Permeance (Perms)	4.8	
Elevated Temperature Volatility, % Weight Loss		
@85° F / 50% RH		Master Builders Solutions Method
30 min.	<1	
60 min.	<1	
@122 °F / 50% RH		
30 min.	2	
60 min.	6	

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

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HOW TO APPLY

SURFACE PREPARATION

1. Verify substrate has properly cured. Concrete should obtain 80% of design strength, typically achieved within 14–28 days.
2. Clean all surfaces of all sand, surface dust and dirt, oil, grease, chemical films and coatings, and other contaminants prior to application. Power wash, sandblast, or shotblast as necessary to achieve the desired surface condition. Repoint any loose, disintegrated, or cracked mortar and allow a minimum of 72 hours drying time before application.
3. Air, substrate, and material temperatures should be 20 °F (-7 °C) and rising at the time of the application. Substrate must be frost free. Do not apply sealer when temperatures are expected to fall below 20 °F (-7 °C) within 12 hours or when rain is expected within 4 hours following application. Maximum application temperature is 95 °F (35 °C). May be applied to slightly damp surfaces.
4. Crack control, caulking, patching, and expansion joint sealants can be installed before or after application of the sealer. Allow adequate curing time following sealant-manufacturer's recommendations. Following the application, remove excess product that might pond on a concave sealant joint.

APPLICATION

1. Test a small area of the surface (minimum 5 by 5 ft [1.5 by 1.5 m]) before general application to ensure desired performance results, aesthetics and coverage rates and to verify application technique. Allow 5–7 days for the product to fully react before evaluating. Contact Technical Service for detail.
2. Stir material thoroughly before and during application.
3. For horizontal surfaces, apply with a flooding action. Sealer may be applied with low-pressure spray, followed by brooming for even distribution.
4. For vertical surfaces, apply by low-pressure, non-atomizing sprayer. Apply from the bottom up for uniform distribution of the sealer. Apply to saturation, with a controlled rundown of 8" (20 cm). In certain cases, a mist coat before general application will help break the surface tension and assure maximum penetration of saturation coat.

DRYING TIME

Typical drying time for MasterProtect H 1000 is 4–6 hours at 70 °F (21 °C) and 50% relative humidity. Cooler temperatures or higher relative humidity can extend the drying time.

CLEAN UP

Clean equipment with xylene or MasterSeal 990.

FOR BEST PERFORMANCE

- Do not apply during inclement weather or when inclement weather is anticipated within 12 hours.
- To prevent damage to nearby shrubbery and landscaping, cover or protect with drop cloth.
- Protect asphalt-based products such as roofing materials or plastic products from overspray.
- Caution should be taken with specialty coated glass. Small areas should be tested prior to application to ensure the product does not discolor the coating. Plastic windows will turn opaque when sprayed with this products.
- MasterProtect H 1000 will not inhibit water penetration through unsound or cracked surfaces or surfaces with defective flashing, caulking, or structural waterproofing.
- Variations in the texture and porosity of the substrate will affect the coverage and performance of the product.
- Paint line striping after the application of MasterProtect H 1000.
- Windows or other non-absorbent substrates subject to overspray should be clean and contaminate free at the time of application. Cleaning may be required after application if dirt or dust is present for the silane to react with.
- 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 version.
- 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 are 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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