PROSPEC®

Floor Preparation • Concrete Repair • Tile Setting

Moisture Guard Max

1. PRODUCT NAME
ProSpec® Moisture Guard Max

2. DISTRIBUTED BY
Bonsal American
8201 Arrowridge Blvd.
Charlotte, NC 28273-5678 USA

Tech Services: 1.800.334.0784
Fax: 1.704.529.5261
Internet: www.prospec.com

3. PRODUCT DESCRIPTION
ProSpec Moisture Guard Max is a one-coat, 100% solids, surface penetrating, film-forming epoxy coating for remediating the moisture vapor transmission related to green and damp concrete surfaces. This proprietary formula has been specifically designed to cure and adhere to concrete under extreme conditions of constant moisture transmission, high pH and high relative humidity. Moisture Guard Max meets the performance requirements in ASTM F3010-13 Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation System for Use Under Resilient Floor Coverings. When installed at the required application thickness, Moisture Guard Max, once cured, reduces the levels of water vapor transmission below the recommended moisture vapor transmission for most adhesives, coatings and floor coverings.

Features and Benefits
- Can be applied to on-grade, above-grade or below-grade concrete substrates
- Apply to concrete with a relative humidity (RH) up to and including 100%
- Up to 97% reduction in moisture vapor transmission
- Alkali resistant to a pH14
- Low VOC
- Low viscosity mix ensures maximum penetration of the concrete substrate to fill in pores and voids
- One-coat application
- Easy mix formula (2 parts A to 1 part B by volume)
- Non-flammable

Uses
- Properly prepared new (at least 7 days old) or existing concrete substrates
- Properly prepared and fully cured lightweight concrete

Safety
READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website www.prospec.com or contact CHEMTREC (24 hours availability) 800-424-9300 for International inquiries +011-703-527-3887, or contact Bonsal American Technical Services at 800-334-0784 (8:00 AM to 5:00 PM Eastern US Time).

4. TECHNICAL DATA

Color (Mixed)	Translucent Green
Mix Ratio (by volume)	2 A : 1 B
Pot Life:	~15 minutes (Empty container immediately after mixing)
Viscosity, mixed (RV2-30)	~700 cps
Solid Content	100%
Flash Point	> 200°F
Clean Up	Xylene or MEK immediately after use
Water Vapor Transmission per Water Method[1]	
Avg. Measured Permeance @ 13 mil (0.013") thickness	≤ 0.1 grains / h^{-1} ft^{-2} in Hg^{-1}
High pH Resistance[2]	
Spot Test, Covered (14d)	No effect
Spot Test, Open (14d)	No effect
Immersion (14d)	No effect

[1]ASTM E 96/E 96M - 05 Test Methods for Water Vapor Transmission of Materials.
[2]ASTM D 1308 -10% & 30% Sodium Hydroxide alkali solution (pH14).

VOC, mixed
9 g/l

LEED Eligibility[1]
- Low-Emitting Materials (IEQ-c4.2)
- Regional Materials (MR-c5)

Packaging
3 gal kit: Product #65510019
Part A: 2 gal (7.6 L) - Translucent blue liquid in a plastic container.
Part B: 1 gal (3.8 L) - Translucent yellow liquid in a plastic container.

Shelf Life
24 months from the date of manufacture when stored in the original, unopened container, away from moisture, under cool, dry conditions and out of direct sunlight.

5. INSTALLATION
Preparation
- The substrate must be POROUS to achieve full penetration of the Moisture Guard Max. Roughen the surface of all smooth formed concrete surfaces such as hard troweled surfaces and precast panels to an opened coarse texture to increase the penetration of Moisture Guard Max.

Preparation (cont.)

- Remove deteriorated concrete, laitance, asphalt, dirt, grease, paint, curing or sealing compounds and any other contaminates that will inhibit the bond or deter the proper penetration of the Moisture Guard Max into the substrate.
- The prepared substrate must be structurally sound, completely clean with an open coarse texture with an ICRI CSP 3-5 profile.
- Vacuum shot blasting is recommended. Use a walk behind magnetic sweeper to remove any remaining shot.

Remove all loose material by vacuuming to result in a dust-free surface before application of Moisture Guard Max.

Brooms shall not be used.

Note: Surface preparation by acid etching is not permitted.

- The substrate must be free from liquid or standing water to ensure full penetration of the Moisture Guard Max. The surface temperature must be a minimum of 5° above the dew point temperature and not have hydrostatic pressure at the time of application.
- Test the surface for direct tensile bond strength per ASTM C 1583 prior to installation. The pull-out value must be greater than or equal to 200 psi (1.4MPa) with failure in the concrete at a depth greater than or equal to ¼" (6 mm) into the base.
- Determine the coverage rate by first testing the substrate moisture vapor content using test method ASTM F 2170 RH probes or the surface moisture vapor transmission per ASTM F 1869 Moisture Vapor Transmission (Calcium Chloride) procedure.
- Application of Moisture Guard Max to a small test area is required to ensure desired performance. Determine the adhesion properties of Moisture Guard Max to the substrate and the moisture vapor transmission.
- Moisture Guard Max cannot accommodate substrate movement. Repair all cracks prior to installation following adhesive manufacturer or floor covering manufacturer recommendations.

Note: It is the responsibility of the installer/applicator to ensure the suitability of the product for its intended use.

Expansion joints and cracks:

- Honor all expansion and control joints. Remove all loose material from the joint. Coat the inside of the joint with Moisture Guard Max to the desired application thickness. Allow the Moisture Guard Max to cure a minimum of 12 hours prior to the installation of backer rod and sealant.
- Non-moving cracks and voids must be completely cleaned and repaired prior to installation of Moisture Guard Max. Moisture Guard Max can be used neat over openings less than 1/8" wide. For openings 1/8" or wider use 48 oz of Moisture Guard Max mixed with 5 lb of ProSpec Feather Edge.

Job Mockups

Bonsal American, Inc. requires that when its ProSpec products are used in any application or as part of any system that includes other manufacturers' products, the contractor and/or design professional shall test all the system components collectively for compatibility, performance and long-term intended use in accordance with pertinent and accepted industry standards prior to any construction. Written documentation of the tests performed shall be satisfactory to the design professional and contractor. Test results must include the means and methods of application, products used, project-specific conditions being addressed, and standardized tests performed for each proposed system or variation.

For Moisture Guard Max job mockup make sure the minimum test area is 100 ft² (1m²). After curing overnight, the tensile bond strength of the system must be ≥ 200 psi (1.4MPa).

Mixing

1. Do not mix more material than can be applied in 15-20 minutes. (Note: High temperatures will reduce the working time.)
2. For easier mixing and application, before using, allow Moisture Guard Max to acclimate to room temperature of 65°F (18°C) to 75°F (24°C) for a minimum of 24 hours.
3. The mixing ratio is 2 part A to 1 part B by volume.
4. Remove Part A and Part B containers from the outer mixing pail. Add Part B (Yellow) to the mixing pail, scraping the sides to remove all material.
5. Pour Part A (Blue) into Part B (Yellow) (2:1) scraping the sides to ensure all of Part A has transferred into the Part B.
6. Mix with a jiffy (paint) style mixing paddle and a low speed mixer (< 400 rpm).
7. Scrape the sides and corners of the mixing pail to incorporate any unmixed material. Continue mixing until a smooth, homogeneous, translucent green consistency is achieved, typically 1 minute total mixing time.
8. Avoid over mixing as this will incorporate air into the mixture.
9. **Immediately pour the mixed material onto the substrate.**

Application

Moisture Guard Max must be applied when the ambient air and surface temperatures are between 50°F (10°C) to 90°F (32°C). The relative air humidity must not exceed 90%. The temperature during application must be steady and/or falling as rising temperatures will reduce the working time.

1. Apply a smooth even coating over the subfloor using a flat squeegee followed by a 3/8" nap roller to achieve the desired coating thickness.
2. Moisture Guard Max, due to its low mixed viscosity, will flow into low areas filling all voids in the concrete surface. As the coating is absorbed and penetrates into the surface, air in the concrete capillaries is displaced causing "out gassing". Minimal out gassing is a normal occurrence and does not affect the moisture vapor transmission. If excessive outgassing is observed, contact ProSpec Technical Services for recommendations.
3. Allow the coating to cure a minimum of 12 hours before applying any material on top of the Moisture Guard Max. (Note: Low temperatures lengthen curing time and high temperatures shorten curing time.)

Application (cont.)

4. After curing, imperfections such as low coating thickness of pinholes must be corrected with a second application of Moisture Guard Max. Allow the first coating to cure a minimum of 12 hours prior to application of second coat.
5. Apply next layer of the finish flooring system within a maximum of 5 days of the final coat.

Cleaning

Clean tools immediately and before cured using xylene or MEK following all handling and safety precautions listed on the xylene container. Be sure to use rubber gloves when cleaning and have plenty of ventilation.

Note: Cured Moisture Guard Max can be removed only by mechanical abrasion.

Coverage

Application rate over a ICRI CSP 3 profile shall not exceed 125 ft^2 / gal. The cured film thickness at 125 ft^2 / gal will be on average 13 mil (0.013"). A rougher or highly absorptive concrete surface will require a lower coverage rate to achieve the 13 mil coating thickness. Contact ProSpec Technical Services for any questions or if the substrate MVT is over 25 lb / 1000 ft^2 / 24 h.

Limitations

- Do not apply if the substrate has a compressive strength less than 3,000 psi (20.6MPa) and tensile bond strength less than 200 psi (1.4MPa).
- Do not apply on any surface that is not clean, solid and absorptive. Vacuum shot blasting is recommended.
- Do not apply to any substrate, cracks or voids that are subject to movement. For the repair of moving cracks, determine the treatment procedure using a consultant or engineer.
- Do not acid etch, grind or sand to prepare the surface.
- Do not apply to concrete and other cement based toppings that have cured less than 7 days.
- Do not apply to non-porous substrates.
- Do not apply if the substrate profile is greater than CSP 6. Reduce the profile and then re-blast to CSP 3-5 profile.
- Do not apply over gypsum based substrates or gypsum based patching compounds.
- Do not apply over toppings, levelers or patching compounds.
- Do not apply onto surfaces that have been treated with a concrete sealer unless removed by mechanical means.
- Do not dilute with water, admixtures or solvents.
- Do not apply onto surfaces that have free standing water (wet) or when the surface temperature is < 5° of the dew point temperature.

Limitations (cont.)

- Do not use as a wear surface.
- Do not use in areas that are subjected to freeze/thaw cycles or extreme thermal movement of the substrate.
- Do not use as a floor leveling product.
- Do not apply if the ambient, surface and material temperatures are not between 50°F (10°C) to 90°F (32°C).
- Do not apply any cement topping or underlayment without first using a primer.

6. TECHNICAL SERVICES

Technical assistance:

Information is available by calling ProSpec Technical Services Hotline (Hours - 8:00 AM to 5:00 PM EST):

Toll Free: 1.800.334.0784
Fax: 1.704.945.0309

Technical and safety literature:

To acquire technical and safety literature, please visit our website at **www.prospec.com**.

[1] ProSpec products can contribute to LEED credits within the Material Resource, (Recycled Content & Regional Materials) and Indoor Environmental Quality (Low Emitting Materials).

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MADE IN U. S. A.

8201 Arrowridge Blvd. Charlotte, NC 28273 • www.prospec.com • E-Mail: prospec@oldcastle.com