TECHNICAL DATA SHEET

Rollershield-RS

DESCRIPTION

A fluid-applied, vapor-permeable air/water-resistive barrier with low-temperature application properties for vertical, above-grade wall assemblies. Rollershield-RS is a flexible, polymer-based coating that resists water penetration and air infiltration while allowing water vapor to pass through the membrane. Applied by spray, roller or brush to approved, properly prepared substrates, Rollershield forms a continuous protective membrane behind a variety of exterior claddings.

USES

Rollershield-RS is intended for use as a fluid-applied air/water-resistive barrier over approved vertical, above-grade wall substrates in residential and commercial construction. When used with SuperiorShield accessory materials, it provides secondary moisture protection in Master Wall proprietary wall systems and behind multiple exterior claddings, including stucco, brick, siding, and metal panels.

FEATURES & BENEFITS

- Provides a continuous membrane for use behind most code-compliant exterior claddings, allowing a single barrier system to be used across multiple cladding types.
- Suitable for projects requiring ABAA specifications and associated quality-assurance requirements.
- Allows water vapor to pass through the membrane, helping reduce the potential for moisture accumulation within the wall assembly.
- May remain exposed for up to 180 days before exterior cladding installation, providing greater flexibility in construction scheduling.
- Meets low-VOC requirements in all 50 states and cleans up with water, eliminating the need for solvent- or citrus-based cleaners.
- May be applied to frost-free substrates at temperatures as low as 25°F (-4°C), providing greater flexibility during cold-weather construction.

SURFACE PREPARATION

Substrates must be frost free, smooth, clean, dry, structurally sound, and free of loose material, coatings, damage, efflorescence, oil, form release agents, curing compounds, dirt, and other bond-inhibiting materials. Verify substrate is flat, free of fins or planar irregularities greater than 1/4 inch in 10 ft.. Surface irregularities and imperfections that could adversely affect the continuous application of the air/water-resistive barrier must be corrected prior to application.

- **Sheathing**: must be installed in accordance with applicable building codes and the sheathing manufacturer's published installation requirements. Damaged sheathing, including areas with missing or damaged glass-mat facer, must be removed and replaced before installation.
- **Masonry:** Substrates must be cured and dry. Where masonry joints are not struck flush, or where split-face CMU or lightweight, porous masonry is present, apply Master Wall MBB Plus Base Coat as needed to provide a smooth, uniform surface. Allow all leveling materials to fully cure and dry before applying Rollershield.
  Concrete: Allow concrete to cure a minimum of 28 days. Remove surface irregularities and mechanically abrade smooth or dense surfaces as needed to remove laitance and promote adhesion.

MIXING

Thoroughly mix Rollershield-RS using an electric drill equipped with a clean, rust-free paddle until a smooth, homogeneous consistency is achieved. Do not add water, overmix, or add accelerators, retarders, or other additives.

PACKAGING
5 gallon (19 L) pail

COVERAGE PER PAIL (ft2/m2) *
- 15 WFT: 450-500 (42-46)
- 30 WFT: 225-250 (21-23)

*Coverage rates are approximate and depend on substrate and application techniques.

SHELF LIFE
2 years from date of manufacture when properly stored in unopened factory packaging.

STORAGE
Store materials in a dry location, upright in unopened factory packaging and protected from direct sunlight. Store at or below 80°F (27°C).

APPLICATION TEMPERATURES
Maintain substrate and ambient temperatures between 32°F (0°C) and 110°F (43°C) throughout application, drying, and curing.

COLD WEATHER
May be applied to frost-free substrates at temperatures as low as 25°F (-3.8°C). Full property development will not begin until temperatures reach 32°F (0°C) and remain above freezing.

SUBSTRATE / REQUIRED WFT*
- Glass Mat Gypsum ASTM C1177: 15 WFT
- Cement Board ASTM C1325: 15 WFT
- OSB Exposure 1: 30 WFT
- Plywood Exterior Grade: 15 WFT
- Concrete: 15 WFT
- CMU: 30 WFT minimum

*Wet Film Thickness

EXPOSURE
May be exposed to weather for up to 6 months (180 days) before installation of the specified wall cladding.

DRYING TIME
Under normal conditions [70°F (21°C), 50% RH]
- Recoat: 4 hours
- Fully Dry: 12-18 hours at 15 WFT and 24 hours at 30 WFT

COLD WEATHER
At 25 to 32°F (-3.8 to 0°C)
- Recoat: 6-12 hours
- Fully Dry: 24 hours once temperatures reach above 32°F (0°C)

APPLICATION

Transition and Detail Treatment

- Treat sheathing joints, inside and outside corners, rough openings, and other transitions using the appropriate SuperiorShield transition treatment. Refer to Master Wall Rollershield Details and the applicable product Technical Data Sheet for installation requirements.
- Spot all fastener heads with Rollershield. Pre-treat sheathing defects and irregularities with SuperiorFlash, including knots in wood-based sheathing, vacant and over-driven fastener holes, and minor cracks in concrete up to 1/16 in.
- Properly flash, wrap, and seal wall terminations, roof-to-wall intersections, transitions between dissimilar materials, and penetrations and openings such as windows, doors, and HVAC components, in accordance with Master Wall Rollershield Details and applicable building codes.
- Treat punched studs at rough openings with SuperiorSeal flashing membrane. At expansion joints, install SuperiorSeal flashing membrane with sufficient slack across the joint to accommodate anticipated movement.
- Protect the tops of walls during construction to prevent moisture and precipitation from entering the wall assembly.

Sheathing / Substrate Application

One Coat Application for Glass Mat Gypsum, Cement Board, Concrete or Plywood: Apply by roller, brush, stainless steel trowel, or suitable spray equipment to produce a continuous, uniform coating with a minimum wet-film thickness of 15 mils. Apply material evenly and completely cover the substrate, maintaining a consistent thickness free of voids, pinholes, etc.

Two Coat Application for OSB and CMU: Apply the first coat by roller, brush, stainless steel trowel, or suitable spray equipment to achieve a continuous, uniform coating at a minimum wet-film thickness of 15 mils. Allow the first coat to dry sufficiently before applying the second coat. Before applying the second coat, visually inspect the surface to confirm the coating is free of blisters, voids and pinholes. Repair deficient areas as necessary and allow repairs to dry sufficiently. Apply the second coat at a minimum wet-film thickness of 15 mils, providing a continuous and uniform finished membrane.

Application Methods:

Roller Application: use a 3/4 in. nap roller. Keep the roller fully loaded with material and apply sufficient pressure to distribute the product uniformly without overworking or stretching it too thin. Periodically check wet-film thickness during application to verify the minimum 15 mil WFT requirement is maintained for each coat. Brushes or stainless steel trowels may be used as appropriate for detail work, transitions, corners, and areas not readily accessible by roller.

Spray Application: Rollershield-RS may be applied using Graco or Titan airless spray equipment, or equivalent equipment capable of meeting the minimum requirements. Remove all filters from the spray equipment and gun before application. Apply in a uniform, consistent spray pattern to achieve the specified wet-film thickness, maintaining complete coverage without voids or pinholes. Where necessary, back-roll or otherwise work the wet material to provide a continuous, uniform coating.

- Output: 1 gal/min minimum
- Hose: 3/8 in. minimum diameter
- Tip Size: 0.027 to 0.031 in.
- Spray Pressure: Minimum 2,000 psi at the gun
- Sprayer Rating: Minimum 3,300 psi
- Hopper Gun: 3/16 to 1/4 in. (4.8 to 6.5 mm) orifice at 23 to 25 psi

COLD WEATHER APPLICATION

IMPORTANT: Final water-resistive and air-barrier properties, including film toughness, are dependent on temperatures rising above freezing during the curing process.

Rollershield-RS may be applied at temperatures below 40°F (4°C), down to 25°F (-3.8°C), provided the following conditions are met:

- Dry Time: Expect extended drying times when applying below 40°F (4°C). Allow 6 to 12 hours between coats. Before installing cladding, allow a minimum of 24 hours of drying after ambient and substrate temperatures rise above 32°F (0°C).
- Precondition Material: Store Rollershield-RS at 65°F to 75°F (18°C to 24°C) for a minimum of 24 hours before application.
- Temperature Requirements: Substrate and ambient temperatures must be at least 25°F (-3.8°C) and rising at the time of application. Temperatures must remain at or above 25°F (-3.8°C) until the material is fully dry.
- Approved Substrates: Apply only over standard sheathing substrates, including glass-mat gypsum sheathing, plywood, and OSB.
- Surface Conditions: Substrates must be dry and free of frost. Surfaces must remain dry throughout application and curing.
- Wet-Film Thickness: Apply Rollershield-RS at a wet-film thickness not exceeding 15 mils WFT per coat.
- Weather Protection: Apply only during dry weather. Protect from rain and other precipitation for a minimum of 24 hours after application. Relative humidity must remain at or below 50% during this period.

CLEAN UP

Clean tools and equipment with water immediately after use and before the material dries. Dried material may require mechanical removal.

LIMITATIONS

1. Not for use in below-grade applications or areas subject to prolonged water immersion.
2. Pressure or fire-retardant treated plywood must be dry and free of contaminants or other materials that may inhibit adhesion.
3. Limit weather exposure to 6 months (180 days) before installation of the specified wall cladding. If exposure limits are exceeded, clean and recoat with Rollershield-RS.
4. May be applied to frost-free substrates at temperatures below 32°F (0°C); however, curing will not begin until temperatures reach 32°F (0°C) and remain above freezing.
5. Designed for positive-side water exposure only. Do not use where negative-side hydrostatic pressure may occur.
6. When air or surface temperatures exceed 95°F (35°C), apply SuperiorFlash to shaded surfaces and schedule application before temperatures reach their highest levels for the day.
7. Where stucco or adhered masonry veneer over metal lath is installed, provide a slip sheet between Rollershield-RS and the lath. The slip sheet may consist of one layer of building paper or an approved drainage medium used in combination with building paper.
8. Limit use to applications with in-service temperatures between -40°F and 180°F (-40°C to 82°C).

TECHNICAL PERFORMANCE

TEST	STANDARD	CRITERIA	RESULT
Solids Content	Calculation	Report value	**69.5% solids by weight (55% by volume)**
Tensile Bond	ASTM C297 / ASTM E2134*	Minimum 15 psi (104 kPa)	**Glass Mat & OSB 35 psi avg. Plywood & Cement Board 74 psi avg. Flashings: 184 psi avg.**
Freeze-Thaw	ASTM E2485 / ICC-ES AC212	No deleterious effects after 10 cycles	**Pass**
Water Resistance	ASTM D2247 / ICC-ES AC212	No deleterious effects after 14 days	**Pass**
Water Vapor Transmission	ASTM E96, Procedure B	Report value	**20* perms @ 15 mils WFT; 10 perms @ 30* mils WFT**
Air Permeance	ASTM E2178	0.004 cfm/ft2 at 1.57 psf 0.2 L/(s·m²) at 75 Pa)	**0.001 cfm/ft2 @ 1.57 psf (0.001 L/s-m2 @ 75 Pa)**
Air Leakage	ASTM E2357	0.04 cfm/ft² at 1.57 psf (0.2 L/(s·m²) at 75 Pa)	**0.0006 cfm/ft² @ 1.57 psf (0.003 L/s·m² @ 75 Pa); 0.04 cfm/ft² @ 6.24 psf (0.02 L/s·m² @ 300 Pa)**
Sequential Testing: Structural Performance Racking Restrained Environmental Water Penetration	ICC-ES AC212 ASTM E1233 ASTM E72 ASTM E2570 ASTM E331	No cracking in the field of the panel, at substrate joints, or at flashing interfaces; no water penetration. No water penetration after 15 min at 2.86 psf (137 Pa)	**Pass**
Elongation	ASTM D412	Report value	**306%**
Accelerated Aging/Weathering	ICC-ES AC212	25 cycles	**Pass**
Hydrostatic Pressure Test	AATCC 127 / ICC-ES AC212	21.6 in (549 mm) water column for 5 hours	**Pass**
Surface Burning Characteristics	ASTM E84	Class A: Flame Spread <= 25; Smoke Developed <= 450	**Flame Spread: 5 Smoke Developed: 5**
Nail Sealability	ASTM D1970	No water penetration after 72 hours at 40°F (4°C).	**Pass**
VOC Content	ASTM D3960, based in part on EPA Method 24	VOC less than 50 g/L	**Pass - 39 g/L**

** Defined as a Class III vapor retarder per IBC and IRC.*

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