

Finestop RA

Vapor Permeable Air/Water-Resistive Barrier Membrane

COLOR

Gray

PACKAGING

27.2 kg per 19-liter pail

(60 lbs per 5-gallon pail)

4" Sheathing Fabric:

101.5 mm x 54.8 m (4" x 180 ft) roll

6" Sheathing Fabric:

152.4 mm x 54.8 m (6" x 180 ft) roll

9" Sheathing Fabric:

228.5 mm x 54.8 m (9" x 180 ft) roll

COVERAGE

Substrate

ASTM C1177 Type Sheathing

41 m² (450 ft²) per pail

Cement Board

46 m² (500 ft²) per pail

Plywood*

24 m² (265 ft²) per pail

Oriented Strand Board (OSB)*

24 m² (265 ft²) per pail

Concrete Masonry Units (CMU)*

Standard Weight 24 m² (265 ft²) per pail

Medium Weight 17 m² (180 ft²) per pail

Light Weight 12 m² (125 ft²) per pail

Poured Concrete

46 m² (500 ft²) per pail

Note: Coverage for C1177 sheathing, cement board, poured concrete is at 10 mils WFT; for plywood OSB and CMU are at 20 mils WFT.

Embed Sheathing Fabric

4" Sheathing Fabric 192 m (630 ft) per pail

6" Sheathing Fabric 128 m (420 ft) per pail

9" Sheathing Fabric 85 m (280 ft) per pail

*Roll or spray / backroll for optimum coverage rate. Other application methods may provide less coverage. Actual results may vary depending on surface porosity, roughness, moisture uptakes, or other factors.



DESCRIPTION

Finestop RA is a one-component, fluid-applied vapor permeable air/water-resistive barrier. This waterproof, resilient coating may be spray-, roller-, brush-, or trowel-applied directly to approved above grade wall substrates. It provides excellent secondary moisture protection behind most wall claddings including EIFS, stucco*, brick, siding and metal panels. Finestop RA is listed in ICC ESR-1878, ESR-1794 and ESR-2986.

*A slipsheet is required for stucco claddings.

USES

For use over the following exterior wall substrates:

Poured concrete/unit masonry, ASTM C1177 type sheathings, including DensGlass™ or DensElement exterior sheathing, eXP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, Weather Defense™ Platinum sheathing, GreenGlass® sheathing, PermaBase™ cement-board by National Gypsum and other cement-boards (ASTM C1325 Type A Exterior), Untreated Exposure I or exterior plywood sheathing (grade C-D or better), Untreated Exposure I OSB, Fire Treated wood sheathing; Pyro-Guard® and Dicon® plywood and FlameBlock® OSB, gypsum sheathing (ASTM C79/ASTM C1396).

Do not use Finestop RA for below-grade applications or on surfaces subject to water immersion.

FEATURES	BENEFITS
Can be used with most code-compliant claddings	One continuous air/water-resistive barrier for buildings with multiple claddings
ICC ESR-2986 Evaluation Report	Confirms compliance with IBC, IRC, and IECC requirements.
ABAA evaluated	Approved for projects requiring ABAA specifications and quality assurance
<1% of allowable air leakage per ASTM E2357 Air Leakage of Building Assemblies test	Easily meets air tightness requirements defined by ASHRAE 189.1, ASHRAE 90.1 and ABAA
Meets ASTM D1970 nail sealability requirements with and without Sheathing Fabric	Self sealing performance
One component, low-VOC formulation	Easy to apply, meets VOC requirements in all 50 states
Nonflammable as applied	Workplace safety
Mineral oil and plasticizer free	Will not dry out or crack due to loss of oil / plasticizer over time
Water based	Cleans up with water; solvents and citrus based cleaners not required
Tough, abrasion resistant	Rugged membrane resists damage after installation
Low temperature performance with LT Additive	Extends minimum application temperature to 4 °C (25 °F)
180 day outdoor exposure rating	Flexible construction scheduling

Finestop RA complies with the air barrier requirements of the Massachusetts State Energy Code.

Test Results

TEST	RESULT
Air Leakage of Air Barrier Assemblies ASTM E 2357	0.0007 l/s.m ² (0.0001 cfm/ft ²) @ 75 Pa (1.57 psf) positive / post conditioning 0.0014 l/s.m ² (0.0003 cfm/ft ²) @ 75 Pa (1.57 psf) negative / post conditioning
Air Permeance of Building Materials ASTM E 2178	0.0049 l/s.m ² @ 75 Pa (0.00098 cfm/ft ² @ 1.57 psf)
Rate of Air Leakage ASTM E 283	0.0185 l/s.m ² @ 75 Pa (0.0037 cfm/ft ² @ 1.57 psf)
Water Vapor Transmission ASTM E 96 Method B	18 Perms (grains/Hr. in Hg. ft ²) @ 10 mils wet film thickness 14 Perms (grains/Hr. in Hg. ft ²) @ 20 mils wet film thickness
Pull-Off Strength of Coatings ASTM D 4541	Pass - Min. 110 kPa (15.9 psi) or substrate failure (Tested over exterior gypsum sheathing, ASTM C1177 glass-mat sheathing, cement board, OSB, plywood; pvc and galvanized flashing)
Nail Sealability (without Sheathing Fabric) ASTM D 1970	Pass - No water penetration at galvanized roofing nail penetration under 127 mm (5") head of water after 3 days at 4 °C (40 °F)
Surface Burning ASTM E 84	Class A flame spread <25 Class A smoke developed index <450
Radiant Heat Multi-Story Tests NFPA 268, NFPA 285	Pass using many wall designs; including Finestone EIFS cladding with 12" EPS insulation Engineering analyses available on request
Water-Resistive Barriers under EIFS ASTM E 2570	Pass (Meets all criteria in the standard)
Compound Stability (Elevated Temperature) ASTM D5147 Section 15	No flowing, dripping, or drop formation up to 177 °C (350 °F)
Fire Resistance ASTM E119/UL 263	Will not add or detract from the rating of a fire resistive wall assembly
Drainage Efficiency ASTM E 2273	99%

Test Results

ICC-ES AC 212 Acceptance Criteria For Water-Resistive Coatings Used As Water-Resistive Barriers Over Exterior Sheathing

Sequential Testing - Structural, Racking, Restrained Environmental Conditioning and Water Penetration

1. Structural: ASTM E 1233 Procedure A	No cracking at joints or interface of flashing
2. Racking: ASTM E 72	No cracking at joints or interface of flashing
3. Restrained Environmental Conditioning: ICC-ES AC 212	No cracking at joints or interface of flashing
4. Water Penetration: ASTM E 331	No water penetration after 90 min @ 299 Pa (6.24 psf) Tested over OSB and gypsum sheathing

Sequential Testing - Weathering

1. UV Light Exposure: ICC-ES AC 212	No cracking or bond failure to substrate
2. Accelerated Aging: ICC-ES AC 212	No cracking or bond failure to substrate
3. Hydrostatic Pressure Test: AATCC 127-1985	No water penetration under 55cm (21.7") head of water for 5 hours

Freeze-Thaw ASTM E 2485 (Method B)	No sign of deleterious effects after 10 cycles (Tested over exterior gypsum sheathing, ASTM C1177 glass-mat sheathing, cement board, OSB, plywood)
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Water Resistance ASTM D 2247	No sign of deleterious effects after 14 day exposure (Tested over exterior gypsum sheathing, ASTM C1177 glass-mat sheathing, cement board, OSB, plywood)
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Tensile Bond ASTM C 297	>103 kPa (15 psi) Tested over exterior gypsum sheathing, ASTM C1177 glass-mat sheathing, cement board, OSB, plywood, CMU; pvc and galvanized flashing
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Tensile Bond (before & after freeze-thaw) ASTM C 297	>103 kPa (15 psi) avg; no failure of the lamina after 10 cycles freeze-thaw (Tested over various substrates)
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ICC-ES AC 148 Acceptance Criteria for Flexible Flashing Materials

Sequential Testing - Weathering

1. UV Light Exposure: ICC-ES AC 148	No cracking or bond failure to substrate
2. Accelerated Aging: ICC-ES AC 148	No cracking or bond failure to substrate
3. Hydrostatic Pressure Test: AATCC 127-1985	No water penetration under 55cm (21.7") head of water for 5 hours

Peel Adhesion ASTM D 3330 Method F	Tested over ASTM C1177 glass-mat sheathing, OSB, plywood, pvc and uncoated aluminum
After UV Exposure	Pass
After Accelerated Aging	Pass
After Elevated Temperature Exposure	Pass
After Water Immersion	Pass

Nail Sealability after Thermal Cycling ASTM D 1970 (Modified), AAMA 711	Pass
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Tensile Strength after UV Exposure ASTM D 5034, AAMA 711	All samples meet the minimum requirement of 3.5 N/mm (20 lbs/in)
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Cold Temperature Pliability ASTM D 1970, AAMA 711	No cracking after bending around a 25 mm (1") mandrel after 2 hour exposure to -18 °C (0 °F)
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Resistance to Peeling AAMA 711	No signs of distress or failure after 24 hours of exposure at room temperature, 50 °C (122 °F), 65 °C (149 °F), 80 °C (176 °F)
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CCMC Tech Guide 07240

Joint Disruption Resistance	No cracking, delamination or other deleterious effects at L/180 deflection
Joint Relaxation Resistance	Pass Max water transmission rate $2 \times 10^{-7} \text{ kg/m}^2 \cdot \text{s}$ ($4.1 \times 10^{-8} \text{ lbs/ft}^2 \cdot \text{s}$) after extension and environmental cycling
Adhesive/Cohesive Bond	Pass Min 0.3 MPa (43.5 psi) in dry state, 0.1 MPa (14.5 psi) after 48 hour water immersion
Nail Popping Resistance	No cracking or delamination around nail head following 1 mm (0.04") protrusion
Water Absorption	Pass Maximum $0.004 \text{ kg/m}^2 \cdot \text{s}$ ($0.0008 \text{ lbs/ft}^2 \cdot \text{s}$)
Accelerated Weather Resistance	No visible effects (cracking, flaking, other deleterious effects) after 334 total hours

MIXING

1. Use directly from original packaging or prepare in a container that is clean and free of foreign substances. Do not use a container which has contained or been cleaned with a petroleum-based product.
2. Mix Finestop RA with a clean, rust-free paddle and drill until thoroughly blended. Dilution of Finestop RA is not recommended.
3. Additives, other than It Additive, are not permitted.
4. Close container when not in use.
5. Clean tools and equipment with water immediately after use. Dried material can only be removed mechanically.

APPLICATION

JOB CONDITIONS

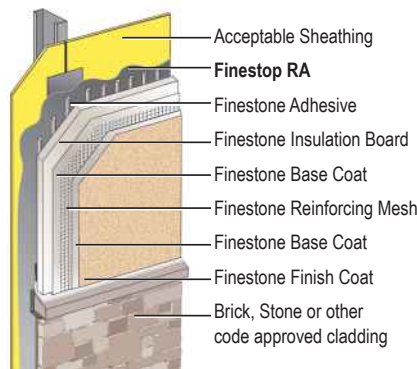
To apply to Finestop RA at ambient temperatures below 4 °C (40 °F) but greater than -4 °C (25 °F), thoroughly blend 1 full quart of LT Additive with one full 5-gallon pail of Finestop RA. When using It Additive, extended drying time can be expected. Do not apply Finestop RA to frozen or frost-laden substrates.

Do not apply Finestop RA in ambient temperatures below 4 °C (40 °F) or onto substrates below 4 °C (40 °F) unless It Additive is used.

Walls shall be capped to prevent moisture and precipitation from entering wall during construction.

Limit the weather exposure of Finestop RA to a maximum of 180 days. Verify surfaces are free of dirt, contaminants, or other deleterious

conditions before application of cladding. Report and correct any such conditions prior to cladding application. Dry/cure times of adhesively applied EPS insulation board installed over Finestop RA may be prolonged, particularly in cool and/or damp weather. Non-cementitious adhesives are not recommended for EPS insulation board attachment to Finestop RA. Proper application is the responsibility of the user.



Multi-clad wall assembly using Finestop RA

SURFACE PREPARATION

Substrate shall be dry, clean, sound and free of release agents, paint or other residue or coatings. Verify substrate is flat, free of fins or planar irregularities greater than 6.4 mm in 3 m (1/4" in 10'). Unsatisfactory conditions shall be reported to the general contractor and corrected before application of Senershield-R.

EQUIPMENT

Use a 20 mm (3/4") nap roller or paint brush. If spraying, refer to Spray Application technical bulletin for spray application equipment and application instructions.

Note: If using roller application, it is necessary to pre-wet the synthetic roller pad with water and spin out the excess water. The pre-wetting only needs to be done once at the start of application.

PROCEDURE

1. Substrate shall be of a type acceptable by Master Builders Solutions and shall be installed per substrate manufacturer's instructions and local code requirements.
2. Rough openings and sheathing joints can be treated with MaxFlash Liquid Flashing Membrane or Sheathing Fabric saturated with Finestop RA. See following sections for additional steps.

USING MAXFLASH

FLASHING ROUGH OPENINGS:

1. Apply a bead of MaxFlash in each corner of the rough opening and tool MaxFlash into corners, ensuring that corners are fully sealed. Where wood bucks are used, tool MaxFlash into gaps between bucks and between the buck and building structure.
2. Apply additional MaxFlash in a zigzag pattern onto head, sill, jamps and exterior substrate. Spread MaxFlash evenly across the rough opening to form a uniform, continuous, void- and pinhole-free membrane with a 12–30 mil thickness. Spread MaxFlash before it skins, typically within 2–3 minutes of application.
3. Extend MaxFlash membrane minimum 4-inches onto the exterior wall, maintaining 12–30 mil thickness.

4. Allow MaxFlash to skin before applying Master Builders Solutions fluid-applied air/water-resistive barrier to sheathing. Lap air/water-resistive barrier a minimum of 2-inches onto MaxFlash, creating a continuous, monolithic air/water-resistive barrier.

5. Allow MaxFlash to cure before installing windows.

SHEATHING JOINTS:

MAXFLASH CAN BE USED TO FILL SHEATHING JOINTS UP TO 1/2" WIDE.

1. Apply a thick bead of MaxFlash to sheathing joints.
2. Spread MaxFlash evenly 1-inch beyond the joint on either side. Apply 20–30 mils of MaxFlash across the sheathing joint.
3. Spot fastener heads with MaxFlash or Master Builders Solutions fluid-applied air/water-resistive barrier.
4. Allow MaxFlash to skin before applying subsequent coat of air/water-resistive barrier. **See the MaxFlash product bulletin for coverages and additional product highlights.**

- OR -

USING SHEATHING FABRIC

FLASHING ROUGH OPENINGS:

Wrap openings with Sheathing Fabric. Apply a generous amount of mixed Finestop RA

to all surfaces and immediately embedding Sheathing Fabric, completely saturating the Sheathing Fabric. If necessary, apply a second coat of Finestop RA to ensure a complete, void-free membrane.

SHEATHING JOINTS:

1. Spot all fasteners and precoat sheathing joints, terminations, inside and outside corners with mixed Finestop RA using a 101 mm (4") wide by 20 mm (3/4") nap roller, brush or spray.
 - Immediately place and center Sheathing Fabric over wet Finestop RA at all sheathing joints, terminations, inside and outside corners, as well as knot holes and check cracks that may exist in plywood or OSB. Ensure Sheathing Fabric extends evenly on both sides of the sheathing joint. Completely saturate Sheathing Fabric with Finestop RA.
 - Lap Sheathing Fabric 63.5 mm (2 1/2") minimum at intersections.
 - If using roller, brush, or trowel application, allow to dry to the touch before applying Finestop RA to entire wall surface. If spraying, "wet on wet" application is acceptable.
 - Apply Finestop RA to concrete, DensGlass™ or DensElement exterior sheathing, eXP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, Weather Defense™ Platinum sheathing, GreenGlass® sheathing,

PermaBase™ cement-board by National Gypsum and other cement-boards (ASTM C1325 Type A Exterior) and gypsum sheathing (ASTM C79/ASTM C1396) with a 20 mm (3/4") nap roller, stainless steel trowel, brush or spray gun to a consistent, minimum 10 wet mil thickness that is free of voids and pin holes. A fully loaded roller pad is required to obtain a consistent, minimum 10 wet mil thickness. Backrolling may be needed to produce a pinhole-free film.

Note: Refer to Spray Application technical bulletin for spray application equipment and application instructions.

- Apply Finestop RA to plywood, OSB or CMU substrate(s) with a 20 mm (3/4") nap roller or spray to a consistent, minimum 10 wet mil thickness. Prior to application of the second coat, visually inspect to assure sheathing surface is blister free and coating is free of voids and pinholes. Repair if needed and then apply a second coat after the initial coating is sufficiently dry. **Note: A minimum of two (2) 10 mil wet coats of Finestop RA is required over OSB, plywood and CMU. Finestop RA may be sprayed to a 20-mil thickness over OSB and plywood in one wet application. Backrolling may be needed to produce a pinhole-free film.**



DRYING TIME

Allow to dry completely, typically 2 to 10 hours, before proceeding with EIFS or other cladding installation. Protect from rain and from temperatures less than 4 °C (40 °F) for 24 hours.

FOR BEST PERFORMANCE

Prior to application of EPS insulation boards for EIFS or alternative claddings, visually inspect the Finestop RA for voids, pinholes, surface deficiencies, etc. Repair deficiencies and areas that are not intact. Apply additional Finestop RA as necessary such that Finestop RA is free of voids, pinholes, etc. All sheathing joints, terminations, inside and outside corners must be reinforced with 4", 6" or 9" Sheathing Fabric or WS Flash 4 or 9 or treated with MaxFlash. Reference *Air/Vapor/Water-Resistive Barrier Guidelines* technical bulletin for proper treatment of rough openings and sheathing joints.

LIMITATIONS

SHIPPING & STORAGE

Protect Master Builders Solutions materials during transportation and installation to avoid physical damage. Store Master Builders Solutions materials in a cool, dry place protected from freezing. Store at no less than 4 °C (40 °F). Protect from extreme heat and direct sunlight.

STACKING

Do not stack pallets.

SHELF LIFE

Approximately 2 years, properly stored in original containers.

TECHNICAL SUPPORT

Consult the Master Builders Solutions Wall Systems Technical Services Department for specific recommendations concerning all other applications. Consult the Finestone website, finestone.master-builders-solutions.com/en, for additional information about products and systems and for updated literature.

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 finestone.master-builders-solutions.com/en, 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.

SOLIDS

74% solids

VOC CONTENT

11 g/l, or 0.09 lbs/gal less water and exempt solvents per ASTM D2369 (based in part on EPA method 24).

LIMITED WARRANTY NOTICE

Master Builders Solutions Construction Systems US, LLC ("Master Builders") warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. MASTER BUILDERS MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of Master Builders. Any claims concerning this product must be received in writing within one

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