BUILDING TRUST

PRODUCT DATA SHEET

Senergy® Senershield-RS

Vapor Permeable Air/Water-Resistive Barrier Membrane

PRODUCT DESCRIPTION

Senergy® Senershield-RS is a one-component elastomeric fluid-applied vapor permeable air/water-resistive barrier for vertical above-grade application. It is highly flexible and can bridge cracks up to 1/32 in. (0.8mm). This resilient coating can be applied directly to approved, above-grade wall substrates by sprayer, roller or brush. It provides excellent secondary moisture protection behind most wall claddings.

USES

Senershield-RS provides excellent secondary moisture protection behind most wall claddings, including EIFS, stucco*, brick, siding and metal panels.
*A slipsheet or other separation layer is required for stucco claddings.

CHARACTERISTICS / ADVANTAGES

- One continuous air/water-resistive barrier for buildings with multiple claddings (can be used with most code-compliant claddings).
- Code compliant per ASTM E2570 and ICC-ES AC212
- One component, easy to apply formulation that meets low VOC requirements in all 50 states.
- Water clean up
- Rugged membrane resists damage after installation.
- Allows for flexible construction scheduling with the application of up to a 6-month outdoor exposure rating.

PRODUCT INFORMATION

Packaging	5-gallon pail (19 liters)
Color	Light grey
Shelf Life	Two (2) years, properly stored in original containers
Storage Conditions	▪ Store in a cool, dry place protected from freezing, extreme heat and direct sun. Store at no less than 40°F (4°C). ▪ Do not stack pallets.

TECHNICAL INFORMATION

Substrate

For use over the following exterior wall substrates:

- Poured or precast concrete/unit masonry
- Glass Mat ASTM C1177 type sheathings, including DensGlass™ or DensElement exterior sheathing (sheathing only), eXP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, Weather Defense™ Platinum sheathing, GreenGlass® sheathing
- Cement-boards (ASTM C1325 Type A Exterior), including PermaBase™ cement-board
- Untreated Exposure I or exterior plywood sheathing (grade C-D or better), untreated Exposure I OSB
- Fire Treated Wood Sheathing: Pyro-Guard® and Dricon® plywood and FlameBlock® OSB
- Gypsum sheathing (ASTM C1396)

	TEST	METHOD	ICC and ASTM E2570 Criteria	RESULTS
Tensile Strength	Tensile Bond	ASTM D4541	Min. 15.9 psi (110 kPa)	28 psi
	Tensile Bond Strength	ASTM E2134/ ASTM C297	Min. 15 (104 kPa)	Pass all listed substrates and flashing materials
Elongation	Elongation	ASTM D412	Report Value	360%
	Mandrel Bend	ASTM D522	Report Value	1/8" mandrel (-40°F/C)- No Cracks
Resistance to fire	Evaluation of Fire Propagation	NFPA 285	In Accordance with IBC Chapter 26	Pass using many wall designs; including Senergy EIFS cladding with 12" EPS insulation Reference technical bulletin NFPA 285 Compliant Wall Systems and Assemblies
	Radiant Heat Exposure	NFPA 268	In Accordance with IBC Chapter 26	No ignition upon 20 minute radiant heat exposure at 1.25 w/cm².
	Surface Burning Characteristics	ASTM E84	Flame Spread <25 Smoke Developed <450	Meets Class A: Flame Spread =0 Smoke Developed =0

Resistance to Weathering	Accelerated Weathering	AC 212	25 Cycles followed by Hydrostatic Pressure Test: No water penetration on the plane of the exterior facing side of the substrate	Pass: No water penetration
	Freeze-Thaw Resistance	ASTM E2485	10 Cycles	Pass: No Deleterious Effects
	Hydrostatic Pressure Test	AATCC 127 (Water Column)	Resist 21.6 in (55 cm) water for 5 hours before and after aging	Pass: No water penetration
	Water Resistance	ASTM D2247	14 Days	Pass: No Deleterious Effects
	Water Penetration	ASTM E331	2.86 psf (137 Pa) for 15 minutes	Pass: 25.4 psf (1216 Pa) for 165 minutes
	Water Peneration	ASTM E331	Tested after Structural Loading, Racking and Restrained Environmental Cycling at 2.86 psf (137 Pa) for 15 minutes	Pass: No Water Penetration
	Water Vapor Transmission	ASTM E96 Procedure B	Vapor Permeable	12.0 perms
	Weathering	ICC ES AC 212/ ASTM E2570	210 hours of UV Exposure, 25 cycles of accelerated weathering, 21.6 in (549mm) water column for 5 hours	Pass
	Wind Driven Rain	F.S. TT-C-555B	No Criteria	Pass

	TEST	METHOD	ICC and ASTM E2570 Criteria	RESULTS
Durability	Nail Seal ability	ASTM D1970	3 days at 40°F with 5” (127 mm) head of water	Pass
	Racking	ASTM E72	Deflection at 1/8 in (3.2mm)	Pass: no cracking at field, joints, or connection
	Restrained Environmental	ICC ES AC 212 / ASTM E2570	5 Cycles of wetting and drying	Pass: No cracking at field, joints or flashing connection
	Structural Loading	ASTM E1233 Procedure A	10 Cycles @ 80% design load	Pass: No cracking at field, joints or flashing connection
Air permeance	Air Infiltration	ASTM E2178	Calculated flow Rate at 75 Pa (1.57 lb/ft², 0.3 in H2O) = < 0.02 L/m²*s (< 0.004 cfm/ft$_2$)	< .00001 L/m2*s (0.00001 cfm/ft²) at 75 Pa (1.57 lb/ft², 0.3 in H2O)
	Air Leakage of Air Barrier Assemblies	ASTM E2357	IECC: <0.2 L/s·m² at 75 Pa (<0.04 cfm / ft² at 1.57 psf)	0.0548 L/(s·m²) at 75 Pa (0.0108 cfm / ft² at 1.57 psf)
	Air Leakage	ASTM E283	No Criteria	< 0.004 cfm/ft²

APPLICATION INFORMATION

Coverage

COVERAGE PER PAIL

- ASTM C1177 Type Sheathing: 450-500 ft² at 10-12 WFT
- Cement Board: 450-500 ft² at 10-12 WFT
- Plywood: 250-300 ft² at 20-24 WFT
- OSB (Oriented Strand Board): 250-300 ft² at 20-24 WFT
- Poured or Precast Concrete: 350-400 ft² at 10-12 WFT
- CMU (Concrete Masonry Units): 175-200 ft² at 20-24 WFT
- CMU skimmed with SikaWall Stucco Surface Leveler: 350-400 ft² at 10-12 WFT
- SikaWall-9000 Sheathing Fabric: 4" wide - 630 ft | 6" wide - 420 ft | 9" wide - 280 ft

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 uptake, type of OSB or other factors.

Ambient Air Temperature

- Do not apply in ambient temperatures below 32°F (0°C) or onto substrates below 32°F (0°C).
- When temperatures less than 32°F (0°C) prevail, provide supplementary heat during the installation and drying period for at least 24 hours after installation and until dry.
- Do not apply in ambient temperature above 100°F (38°C) or surface temperature above 120°F (49°C).

Equipment

- Airless spray equipment capable of spraying a minimum of 1 gallon per minute with a minimum size reversible tip of 0.019 is required. Airless equipment capable of greater deliveries can use larger tips. Tip sizes of 0.021 to 0.025 are recommended. Tip sizes greater than 0.025 provide too much material and affect the overall consumption of the material affecting

	the coverage rates. If pump filters are used, minimum size of filter recommended is a 60-mesh filter. For additional information, reference the Spay Application Technical Bulletin. ▪ When spraying over plywood and OSB, back rolling is recommended to completely encapsulate and create a pinhole-free application. ▪ For roller application, use a 3/4"-1 1/4" nap roller.
Drying Time	Under average conditions 70°F (21°C), 50% Relative Humidity ▪ Typically 24 hours depending upon temperature, humidity and substrate. ▪ Additional coats may be applied within 1-4 hours, depending on conditions. Allow to dry completely prior to proceeding with cladding installation.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

USES

- Limit the weather exposure of Senershield-RS to a maximum of 6 months (180 days). If exposure limits are exceeded, clean and recoat with Senershield-RS.
- When temperatures are less than 32°F/0°C prevail, provide supplementary heat during the installation and drying period for at least 24 hours after installation and until dry.
- Use only on surfaces that are sound, clean, dry, and free from any residue that may affect the ability of the Senergy® Senershield-RS to bond to the surface.
- Do not use on damp surfaces, below-grade applications or on surfaces subject to water immersion.
- Ensure wood sheathings and lumber, including fire and pressure-treated, are dry throughout the thickness of the material and free of any bond-inhibiting materials prior to application of Senershield-RS.
- Senershield-RS is designed as a positive side water barrier and does not function as a negative side barrier product.
- When mechanically fastening components through Senershield-RS, ensure that all fasteners are anchored directly into structural framing members. Fasteners must not be placed between framing supports. Do not use powder-actuated tools, as such methods may compromise the integrity of the substrate. All penetrations through the wall assembly shall be properly sealed to maintain a continuous air and watertight barrier. Where applicable, conduct performance testing to verify the air and watertightness of the assembly.
- Not for use with open joint rainscreen cladding systems.

LIMITATIONS

- Expect extended dry time for cold temperature application less than 40°F (4°C) down to 32°F (0°C). Final air/water-resistive properties and film durability rely on temperatures rising above freezing (32°F/0°C).
- Walls shall be capped to prevent moisture and precipitation from entering wall during construction.
- Dry/cure times of adhesively applied EPS insulation board installed over Senershield-RS may be prolonged, particularly in cool and/or damp weather. Non-cementitious adhesives are not recommended for EPS insulation board attachment to Senershield-RS. Proper application is the responsibility of the user.
- A minimum of two (2) 10-12 mil wet coats of Senershield-RS is required over OSB, plywood and CMU.
- Punched studs in rough openings must be treated with SikaWall-85 Flash Seal NP flashing membrane.
- Ensure all fasteners are spotted with Senershield-RS or SikaWall-80 MaxFlash.
- Prior to application of claddings, visually inspect the Senershield-RS for voids, pinholes, surface deficiencies, etc. Repair deficiencies and areas that are not intact. Apply additional Senershield-RS as necessary such that the barrier is free of voids, pinholes, etc. All sheathing joints, terminations, inside and outside corners must be reinforced with SikaWall Sheathing Fabric embedded in Senershield-RS, MaxFlash or Flash Seal NP.
- Treat expansion joints with SikaWall Flash Seal NP, provide sufficient slack in Flash Seal NP at joint to allow for movement.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

- An acceptable substrate (see list above) should be used and installed per the substrate manufacturer's instructions and local code requirements.
- Substrate shall be dry, clean, sound and free of release

agents, paint/coatings, other residue or other deleterious conditions before application of cladding. Verify substrate is flat, free of fins or planar irregularities greater than ¼" in 10' (6.3 mm in 3 m). Unsatisfactory conditions shall be reported to the general contractor and corrected before application of Senershield-RS and claddings.

MIXING

- Mix Senershield-RS with a clean, rust-free paddle and drill until thoroughly blended.
- In certain spray applications, thinning of Senershield-RS may be necessary. Only clean, potable water shall be used. Water must be added gradually and shall not exceed 16 oz (0.5L) per pail.
- No additives of any kind, such as rapid binders, antifreeze, accelerators, fillers, pigments, etc. should be added under any circumstances.

APPLICATION

FLASHING ROUGH OPENINGS USING SIKAWALL-9000 SHEATHING FABRIC

1. Cut Sheathing Fabric to the desired size. Apply a generous amount of mixed Senershield-RS receiving coat across rough opening and out onto the substrate. Immediately embed Sheathing Fabric, and ensure complete saturation. An additional coat of Senershield-RS may be necessary to ensure a complete, void-free membrane.
2. Extend Sheathing Fabric a minimum 2" onto the exterior wall. Reference Senershield-RS published details for step by step application details.

Note: MaxFlash can be used as an alternative to Sheathing Fabric. Reference SikaWall-80 MaxFlash product data sheet for application instructions.

SHEATHING JOINT REINFORCEMENT USING SIKAWALL-9000 SHEATHING FABRIC

1. Precoat sheathing joints, inside and outside corners as well as knot holes and check cracks that may exist in plywood or OSB with mixed Senershield-RS.
2. Immediately place and center Sheathing Fabric over wet Senershield-RS. Ensure Sheathing Fabric extends evenly on both sides of the sheathing joint. Completely saturate Sheathing Fabric with Senershield-RS.
3. Lap Sheathing Fabric 2½" (63.5 mm) minimum at intersections.
4. If using roller or brush application, allow to dry to the touch before applying Senershield-RS to the entire wall surface. If spraying, a "wet on wet" application is acceptable.

Note: Sheathing Fabric can be used to treat sheathing joints up to 1/4" wide, not for use in expansion joints. MaxFlash can be used for static joints up to 1/2" or as an alternative to Sheathing Fabric. Reference SikaWall-80 MaxFlash product data sheet for application instructions.

SENERSHIELD-RS APPLICATION OVER ACCEPTABLE SUBSTRATES

For concrete, glass-mat sheathing (C1177), gypsum sheathing (ASTM C1396) and cement board (ASTM C1325 Type A Exterior); apply with airless spray equipment, or 3/4"-1 1/4" nap roller, or brush to a consistent, minimum 10-12 wet mil thickness that is free of voids and pin holes. If rolling, a fully loaded roller pad is required to obtain a consistent, minimum 10-12 wet mil thickness.

For plywood, OSB, or CMU substrate(s); apply with airless spray equipment or 3/4"-1 1/4" nap roller a consistent, first coat a minimum 10-12 wet mil thickness. Prior to application of the second coat, visually inspect to ensure 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) 10-12-mil wet coats of Senershield-RS is required over OSB, plywood and CMU.

Applying with airless spray equipment, backrolling may be needed to produce a pinhole-free film. Note: Refer to Spray Application technical bulletin for spray application equipment and application instructions.

Consult Sika Facades Technical Services Department at +1 (800) 226-2424 for specific recommendations concerning all other applications.

LEGAL DISCLAIMER

- **KEEP CONTAINER TIGHTLY CLOSED**
- **KEEP OUT OF REACH OF CHILDREN**
- **NOT FOR INTERNAL CONSUMPTION**
- **FOR INDUSTRIAL USE ONLY**
- **FOR PROFESSIONAL USE ONLY**

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