



AIR-SHIELD™ SMP

Sheet Membrane Vapor Permeable Air Barrier

DATA SHEET NO. 5180-050

DESCRIPTION

AIR-SHIELD SMP is a self-adhesive, vapour permeable, air/liquid moisture barrier that is designed to be fully bonded to the substrate without the use of an adhesive or primer. AIR-SHIELD SMP is a tough, durable membrane that exhibits excellent resistance to air leakage and liquid water intrusion, while at the same time allows vapour to readily pass through to allow the wall assembly to dry.

USES

AIR-SHIELD SMP has been specifically formulated to act as an air and liquid moisture barrier, allowing vapour to pass through it. It may be applied to most common surfaces and integrated into various wall assemblies. AIR-SHIELD SMP is suitable for both new construction and retrofit applications and works equally well as an air barrier on precast concrete, cast-in-place concrete, masonry (concrete block), interior and exterior gypsum board, Styrofoam, primed steel, aluminum mill finish, anodized aluminum, primed galvanized metal, drywall, and plywood.

FEATURES/BENEFITS

- When properly applied, helps reduce air and moisture intrusion.
- Bonds easily and securely to a variety of building materials - no primer required.
- Excellent adhesion - remains firmly bonded to the substrate.
- High vapor permeability - allows the transmission of moisture vapour through porous building materials.
- Controlled thickness.
- Highly flexible - bridges cracks, which may form in the substrate.
- Can be left exposed to UV for a maximum of 290 days.
- Tough, durable membrane helps resist punctures and tears during the installation process.
- Sheet-applied – no costly spray equipment or enhanced protective gear needed during installation.
- Can be installed in a wide range of temperatures.

PACKAGING

980 mm (38.5") x 50 m (164') Rolls

AIR-SHIELD SMP can also be cut to widths of 75 mm, (2.95"), 150 mm (5.91"), and 300 mm (11.81").

COVERAGE

48.9² m (526 ft.²) per roll

SPECIFICATIONS/STANDARDS

- Exceeds CAN/ULC S741 (materials) and CAN/ULC S742 (assemblies) requirements
- Exceeds NABA maximum assembly air leakage requirements when tested in accordance with ASTM E2357.
- Exceeds NABA maximum material air leakage requirements when tested in accordance with ASTM E2178.

TECHNICAL DATA

Property	Test Method	Result
Roll Length		50 m (164')
Roll Width		980 mm (38.5")
Roll Weight		15.9 kg (35 lb.)
Mil Thickness		26 Mils
Requires Primer		NO
Installation Temperature		-10° to 60° C
Service Temperature		-40° to 100° C
Water Resistance	AC 38	Pass
Air Permeance	ASTM E2178	<0.02 L/sec.m ² @ 75 Pa (<0.004 cfm/ft. ² @ 75 Pa)
Air Permeance	CAN/ULC S741	<0.02 L/sec.m ² (0.004 cfm/ft. ²) @ 75 Pa
Air Leakage	ASTM E2357	<0.2 L/sec.m ² @ 75 Pa (<0.04 cfm/ft. ² @ 75 Pa)
Air Leakage Rate Classification	CAN/ULC S742	A1
Vapor Permeance	ASTM E96 - A	41 perms
Vapor Permeance	ASTM E96 - B	54 perms
Peel Adhesion	ASTM D3330	Pass
Tensile Strength - MD	ASTM D882	5.64 N/m (50 lbf/in)
Tensile Strength - XD		3.39 N/m (30 lbf/in)
Flame Spread	ASTM E84	Class A
Smoke Development Index	ASTM E84	Class A
Low Temperature Flexibility	AC 38	Pass
Nail Penetration	ASTM D1970	Pass

*For UV exposure limits, please view AIR-SHIELD SMP MAXIMUM EXPOSURE TIMES map.

AIR-SHIELD SMP may be used in NFPA 285 complying wall assemblies. Contact W. R. MEADOWS for further information.

APPLICATION

Refer to AIR-SHIELD SMP INSTALLATION GUIDELINES document for complete installation instructions.

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Surface Preparation ... All surfaces to be protected must be clean, dry, frost-free, and smooth. Remove any sharp protrusions and repair all defects. All surfaces to receive AIR-SHIELD SMP must be clean of oil, dust, and excess mortar. Strike masonry joints flush. Concrete surfaces must be smooth and without large voids, spalled areas, or sharp protrusions. Concrete must be cured a minimum of 14 days and must be dry before AIR-SHIELD SMP is applied. Where curing compounds are used, they must be clear resin-based, without oil, wax or pigments. Prepare substrate per manufacturer's instruction prior to application of membrane. All walls to receive AIR-SHIELD SMP must be capped to prevent moisture infiltration from entering the wall during construction.

Application Method ... AIR-SHIELD SMP should be installed with a hand roller and stiff brush to create a continuous and effective bond with the substrate. Always install with an overlap, with the upper courses lapped over lower courses, in a shingle fashion. All horizontal and vertical overlaps should be a minimum of 63.5 mm (2.5").

AIR-SHIELD SMP can be applied at minimum air and surface temperatures of -10° C and rising. Pre-cut material to required length. Apply membrane to surface by removing release paper and rolling membrane firmly into place. Remove release paper only as membrane is being applied. Using a hand roller or stiff brush, roll press the membrane into place to ensure full adhesion to the substrate. Remove all wrinkles and/or fish mouths. Overlap subsequent courses of membrane a minimum of 63.5 mm (2.5"). Cut AIR-SHIELD SMP membrane with a utility knife to detail around protrusions and masonry reinforcing. Seal all membrane terminations, penetrations, and protrusions with AIR-SHIELD LIQUID FLASHING.

At the end of each working day, protect the leading edge of AIR-SHIELD SMP with a bead of AIR-SHIELD LIQUID FLASHING.

Rough Openings and Penetrations ... AIR-SHIELD SMP can be used for detailing of rough openings and is to be installed in accordance with AIR-SHIELD SMP Installation Guidelines and W. R. MEADOWS published details. Alternatively, AIR-SHIELD LIQUID FLASHING can be used.

Through Wall Flashing ... Strips of AIR-SHIELD are to be used for all concealed flashing installations. All areas where AIR-SHIELD strips are to be installed requires application of MEL-PRIME™ prior to installation. AIR-SHIELD strips should be recessed 13 mm (1/2") from the face of the masonry.

PRECAUTIONS

Failure to roller the membrane effectively may result in poor adhesion to the substrate. AIR-SHIELD SMP should only be applied in dry weather when air and surface temperatures are above -10° C. Do not install AIR-SHIELD SMP in adverse weather conditions. AIR-SHIELD SMP is not designed for permanent exposure. Contact W. R. MEADOWS technical services for exposure limits. Membrane adhesion of self-adhesive membranes on oriented strand board (OSB) can sometimes be affected by the level of surface texture or the presence of wax that is part of the binder used to bond together the wood strands. In situations where the membrane adhesion is compromised, in-situ adhesion tests should be performed to determine suitability of substrate prior to full installation. If there are variations in the OSB surface, multiple tests may be required. Refer to safety data sheet for complete health and safety information.

MASTERFORMAT NUMBER AND TITLE

07 27 15 - Non-Bituminous Self-Adhering Sheet Air Barriers

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