

AIRBOARD® BY AIRFOAM INDUSTRIES
MITTEN

Airfoam Airboard® AERO

SKU: AERO-A100

GAUGE

5/8" · 1" · 1-1/16" · 1-1/2" · 2" · 2-1/8"

WARRANTY

Limited product warranty — see airfoam.com/terms

PROFILES

4 ft × 8 ft — 5/8" to 2-1/8" standard thicknesses (custom to 6" available)

Airfoam Airboard® AERO is a graphite-enhanced GPS continuous insulation board that combines permanent R-4.7/in insulation with an integral WRB in a single 4 ft × 8 ft panel. The perforated reflective BOPP facers add strength, radiant barrier performance, and vapour permeability. Available in 5/8" to 2-1/8" standard thicknesses. CAN/ULC-S701.1 Type 1 and ASTM C578 Type I certified. Qualifies as NBC Second Plane of Protection when seams are sealed.

Key Features

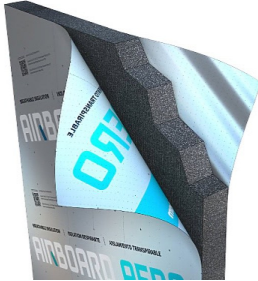
- GPS (Graphite EPS) core — R-4.7/in at 75°F (R-5/nominal inch) with ZERO thermal drift
- Perforated reflective BOPP metallic facers both sides — adds strength, reduces breakage, acts as radiant barrier
- Boards "d 2-1/8" are vapour permeable — NOT a vapour barrier in Canada ("e 60 ng/Pa·s·m²)
- No HFCs, CFCs, HCFCs, nor formaldehyde · GPS-compatible polymeric (non-HBCD) flame retardant
- CAN/ULC-S701.1 Type 1 · ASTM C578 Type I · ICC-ES AC12 · CCRR-0379 · NFPA 285 compliant
- Integral WRB — qualifies as NBC 9.27.3.4 Second Plane of Protection when seams sealed (no separate housewrap needed)
- 6 standard thicknesses: 5/8" (R-2.94) to 2-1/8" (R-10) · custom to 6" on request
- Class A flame spread (ASTM E84 "d 25 / Smoke "d 450) · ¾ Hour fire-rated composite wall assembly
- ~29% R-value boost estimated by adding 1" AERO to a 2x6 R24 batt insulation wall

Profiles & Specifications

AERO-A100

Airboard® AERO A100

GPS continuous insulation board with integral water-resistive barrier. The graphite-enhanced expanded polystyrene (GPS) core delivers a permanent R-4.7/in at 75°F with zero thermal drift — no blowing agent to escape over time. Both faces are laminated with a 1 mil perforated biaxially oriented polypropylene (BOPP) reflective metallic film that adds strength and flexibility, reduces site breakage, and acts as a radiant heat barrier next to an air space. When all seams, penetrations, and transitions are sealed with approved sheathing tape, AERO eliminates the need for a separate water-resistive barrier, qualifying as Second Plane of Protection per NBC 9.27.3.4. Board dimensions: 4 ft x 8 ft. Available in 5/8" to 6" thicknesses.



Core Material	Graphite Expanded Polystyrene (GPS) — closed-cell, graphite nanoparticle-enhanced
Facers	1 mil (25.4 µm) perforated reflective BOPP metallic film — both sides
R-Value / in (75°F)	R-4.7 per actual inch (R-5 per nominal inch) — ASTM C518/C177
R-Value / in (40°F)	R-4.9 per actual inch — ASTM C518/C177
Thermal Drift	Zero — air-based insulation, no blowing agent
Water Vapour @ 1"	2.2 perm (126 ng/Pa·s·m ²) — Class III semi-permeable · NOT a vapour barrier "d 2-1/8" (Canada)
Water Vapour @ 2-1/8"	1.2 perm (68 ng/Pa·s·m ²) — Class II semi-impermeable · vapour barrier > 2-1/8" (Canada)
Water Resistance	> 24 hours @ 300–747 Pa — Modified AATCC 127 Water Column
Water Absorption	0.27% by volume (ASTM D2842, 4 days)
Compressive Strength	10 psi / 70 kPa minimum @ 10% deformation (ASTM D1621)
Flexural Strength	25 psi / 172 kPa minimum, GPS core (ASTM C203)
Density	1 lb/ft ³ nominal (14.4 kg/m ³ minimum) — ASTM D1622
Flame Spread (USA)	"d 25 — Class A (ASTM E84 / UL 723, NFPA 101)
Smoke Developed (USA)	"d 450 — Class A (ASTM E84)
Flame Spread (Canada)	"d 295 (CAN/ULC-S102.2)
Flame Retardant	Polymeric (non-HBCD) type
Limiting Oxygen Index	"e 24% (ASTM D2863)
Fire Rating	¾ Hour Composite Wall Assembly — CAN/ULC-S101 / ASTM E119 Design CPIA/CWP 45-01
Max Service Temp	Long-term 74°C (165°F) · Intermittent 79°C (175°F)
Thermal Expansion	5–7 × 10 ⁻⁶ / °K (ASTM D696)
Mold/Fungi Resistance	GPS has no nutritional value — no mold/fungi growth per ASTM C1338
No HFCs/CFCs/Formaldehyde	Safe, inert — GHS Non-Hazardous
Board Size	4 ft x 8 ft (1.22 m x 2.44 m)
Thicknesses	5/8" · 1" · 1-1/16" · 1-1/2" · 2" · 2-1/8" (standard) · 5/8"–6" custom
Certification (Canada)	CAN/ULC-S701.1 Type 1
Certification (USA)	ASTM C578 Type I · ICC-ES AC12 · CCRR-0379
WRB Compliance	NBC 9.27.3.4 Second Plane of Protection when seams sealed · Exceeds CCMC 07102 §6.4.5 · ASTM E2556 Type I
NFPA 285	Meets with specific limitations for exterior wall assembly
Warranty	Limited product warranty — see airfoam.com/terms

Certifications & Testing Standards

Airfoam Airboard® AERO meets or exceeds the following Canadian and international performance standards.

• CAN/ULC-S701.1 Type 1 — Thermal Insulation, Polystyrene Boards (Canada)
• ASTM C578 Type I — Rigid Cellular Polystyrene Thermal Insulation (USA)
• ICC-ES AC12 — Foam Plastic Insulation evaluation criterion
• CCRR-0379 — Code Compliance Research Report (see airfoam.com/Airfoam-Code-Report-CCRR-0379.pdf)
• NBC 9.27.3.4 — Second Plane of Protection (WRB) when all seams, penetrations, and transitions are sealed
• CCMC 07102 §6.4.5 — WRB bulk water resistance exceeded (Modified AATCC 127)
• ASTM E2556 Type I — WRB water resistance standard exceeded
• ASTM E84 / UL 723 / NFPA 101 — Class A surface burning (Flame Spread "d 25 / Smoke Developed "d 450) up to 6" thick
• CAN/ULC-S102.2 — Surface Burning (Flame-Spread "d 295) (Canada)
• CAN/ULC-S101 / ASTM E119 — ¾ Hour Fire Rating, Composite Wall Assembly Design CPIA/CWP 45-01
• NFPA 285 — Compliant (with specific limitations) for exterior wall assembly fire propagation
• ASTM C1338 — Mold and fungi resistant (GPS has no nutritional value for organisms)
• GHS — Non-Hazardous · No HFCs, CFCs, HCFCs, nor formaldehyde · Polymeric (non-HBCD) flame retardant
• Third-party certified quality assurance · Manufactured by Airfoam Industries Ltd. — Surrey BC & Paris ON · Distributed by Mitten / Cornerstone Building Brands

Installation Guide

- 1 TIMING & ORIENTATION** — Install Airboard® AERO after roof sheathing and step flashings are in place, and before windows and doors. Orient boards vertically for WRB applications and tall walls; horizontal orientation is also acceptable. Install with the printed side facing outward.
- 2 FASTENING** — Use wood screws or ring-shank nails with minimum 1" cap washers (e.g. Wind-Lock ULP-302). Minimum embedment: 3/4" into wood studs for screws, 1" for nails; at least 1/4" penetration through structural sheathing. Space fasteners minimum 3" from board edges and 6" from jambs/sills/thresholds, 9" from window/door heads. Maximum spacing without rainscreen strapping: 16" [406mm] at board edges, 24" [610mm] at center field. For metal stud applications use self-tapping screws with minimum 1" cap washers.
- 3 SEAMING FOR WRB** — Apply approved sheathing tape (minimum 2-3/8" / 60mm wide) centered across all butt joints and seams using a J-roller for firm adhesion. Install shingle-fashion from the bottom up so upper course laps over lower. Seal all penetrations, cuts, tears, and transitions to structure with tape or compatible sealant. Approved tapes: Tuck Tape® (Red) by Cantech, Super Stick Building Tape® by Protecto Wrap®, 3M™ 3015. Apply tape between 15°F and 120°F [-9°C to 49°C].
- 4 GAPS & PENETRATIONS** — Fill any gaps between boards, around utility penetrations, or at structure transitions with low-expansion polyurethane foam (DOW EnerFoam, LePage Tite Foam, or equivalent). Do not use high-expansion foam. Back-fill with backer rod as needed before applying foam in wide gaps.
- 5 RAINSCREEN STRAPPING** — For all cladding types, install 3/4" furring strips over AERO to create a ventilated air space before applying exterior cladding. Drive rainscreen strapping screws at an upward angle of approximately 15° into studs for increased pull-out resistance (note: 15–17° angle requires ~5% longer screws to achieve the same embedment depth).
- 6 FLASHING AT OPENINGS** — At window and door rough openings, use self-adhered butyl flashing (Henry Blueskin® Butyl Flash or Resisto® All-Weather Butyl Flashing Tape) integrated with the AERO board and sheathing tape to form a continuous weather seal. Use DuPont™ FlexWrap™ EZ at sills and curved transitions.
- 7 UV EXPOSURE** — Cover Airboard® AERO with exterior cladding or rainscreen strapping within 30 days of installation. Prolonged UV exposure degrades the BOPP facers and GPS core. Temporary UV protection is required on extended schedules.
- 8 CHEMICAL COMPATIBILITY** — Keep the GPS core away from hydrocarbons (fuels, oils, tar), organic solvents (acetone, benzene, paint thinner), ethers, esters, aldehydes, amines, strong oxidizers, concrete release agents, and asphaltic sealant compounds — all of which dissolve GPS. Use only GPS-compatible adhesives such as Loctite® PL 300 Foamboard Adhesive. GPS is combustible — keep away from open flames, sparks, and excessive heat sources. A thermal barrier is required as specified by applicable building code.



MITTEN

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