

ACFOAM® NAIL BASE

DATA SHEET

➔ ACFOAM® NAIL BASE PRODUCT DESCRIPTION

ACFoam® Nail Base Insulation

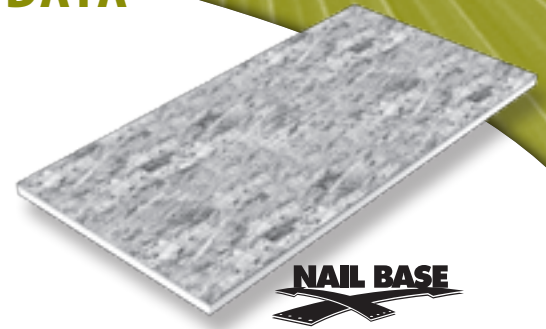
- Is a thermally efficient polyiso insulation board bonded to 7/16 in. APA/TECO rated OSB on the top side.
- Provides the desirable benefits of both a nailable surface and insulation making installation an easy one-step labor saving process.
- Made to order in 4' x 8' (1220mm x 2440mm) panels and in nominal thicknesses of 1.5" to 4.5". Other thicknesses are available on special order. Also available with minimum 19/32" CDX plywood.
- CFC, HCFC, and HFC-free foam blowing technology with zero ozone depletion potential (ODP) and zero (negligible) global warming potential (GWP).

ACFoam® Nail Base available in 4' x 4' (1220mm x 1220mm) and 4' x 8' (1220mm x 2440mm) panels.

➔ ACFOAM® NAIL BASE RECOMMENDED USES

ACFoam® Nail Base Insulation

- Typically specified for use over solid wood and metal decks having a slope of a minimum 1/4" per foot. Slopes must be appropriate for the type of roof system specified. The OSB provides an excellent base for nailing non-asphaltic shingles. It is especially efficient as a component over cathedral ceilings in log homes, conventional housing, churches and athletic auditoriums.
- Can be installed under metal roof systems and over metal decks minimum 22 gauge or heavier. This product should be used only in strict accordance with Atlas recommended uses and application instructions. Atlas recommends the use of vapor retarder for all projects except in extreme cooling climates. However, determining the need for and location of the vapor retarder remains solely the responsibility of the architect, engineer or design professional.



➔ CODES AND COMPLIANCES

Federal Specification HH-1 1972/GEN has been cancelled.

- ASTM C 1289, Type V
- Miami-Dade County, Florida Product Control No. 08-0111.01 (with 19/32" plywood)
- State of Florida Product Approval #FL6796
- State of California, License #TC 1231
- IBC, NBC, UBC, and SBC Sections on Foam Insulation (Chapter 26)
- APA/TECO rated OSB nailing surface

FM Standard 4450/4470 Approval(1-90,1-105)

Approved for Class 1 insulated roof deck construction. Refer to FM Approval Guide and RoofNav for systems details.

UL Standard 1256 Classification

Insulated Metal Deck Construction Assemblies Construction No.120 and No.123

UL Standard 790 Classification (ASTM E 108)

For use with Class A, B or C shingles, metal or tile roof coverings.

UL Standard 263 Fire Resistance Classification (ASTM E119)

Some classifications for fire resistance are P225, P230, P259, P508, P510, P514, P701, P717, P719, P723, P728, P732, P734, P739, P801, P815, and P819. See UL Fire Resistance Directory.

➔ TECHNICAL DATA

NOMINAL THICKNESS	in	1.5	2.0	2.5	3.0	3.5	4.0	4.5
	mm	38	51	64	76	89	102	114
LTTR-Values*		6.6	9.6	12.7	15.9	19.1	22.3	25.6
RSI**		1.16	1.69	2.24	2.80	3.36	3.92	4.51
Pieces Per Package		31	23	18	15	13	11	10
Square Feet per Package		992	736	576	480	416	352	320

Sizes: ACFoam® Nail Base is made to order in 4' x 8' (1220mm x 2440mm) size panels and in nominal thicknesses of 1.5" to 4.5" in 1/2" increments. Custom thicknesses are available on special order.

*Long-term thermal resistance values of the foam were determined in accordance with CAN/ULC-S770 and ASTM C 1289-02, Annex A1. All test samples were third-party selected and tested by an accredited materials testing laboratory. The R-value of .55 for 7/16 in. OSB was provided by APA- The Engineered Wood Association, which cited ASHRAE Handbook, Fundamentals.

R means resistance to heat flow. The higher the R-value, the greater the insulating power. Compare insulation values before you buy. To get the marked R-value, it is essential that this insulation be installed properly.

**RSI is the metric expression of LTTR (m²- K/W)

➔ ATLAS NAIL BASE FASTENERS

Atlas Nail Base Fasteners are specially engineered fasteners for installing Nail Base Insulation and are required as a part of the Nail Base Insulation System.

AVAILABLE LENGTHS

2 5/8"	3"	3 1/2"	4"	4 1/2"	5"	5 1/2"	6"	6 1/2"	7"	7 1/2"	8"	8 1/2"	9"	9 1/2"
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MATERIAL AND NOMINAL DIMENSION SPECS

Material	Maj. Dia.	Head Type	Head Size
Carbon Steel with Epoxy Coating	.245 Nom.	Flat with Square Recess	5/8" Nom.

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→ INSTALLATION OF ACFOAM® NAIL BASE

Atlas Nail Base should be installed directly over the vapor retarder that has been applied over the deck.

Atlas requires the use of Atlas Nail Base Fasteners. Refer to Guide Details For Atlas Nail Base Insulations for fastening patterns and other application recommendations.

Heavy snow and ice loads, very steep pitches, high humidity structures, or very high wind areas may necessitate custom fastening patterns and design. For design conditions beyond those contained in the Guide Details, a professional engineer or architect should be consulted for those special applications.

Cover with Atlas No.15 roofing felt, No.30 roofing felt, or Summit Synthetic underlayments. Use only enough nails as required to keep felt in place. Any insulation that has become wet must be replaced with dry product prior to applying the roof coverings. Atlas also offers a wide variety of roof shingle products including three-tab and laminated shingles as well as felts and accessories.

→ VAPOR RETARDERS

Moisture vapor tends to migrate from warmer to cooler areas. In building construction, vapor retarders are used to inhibit or block the passage of moisture into walls or roofing assemblies. Vapor retarders also serve as air barriers to limit the movement of moisture-laden air from the interior to the exterior. To determine whether a vapor retarder is necessary, calculations based on occupancy and relative humidity inside the building and the outside temperatures during the various seasons must be performed. Consult the *NRCA Roofing Manual, Membrane Roof Systems 2007* for more information regarding vapor retarders.

The designer must be aware of the actual conditions of the specific installation. The designer has the responsibility to determine whether a vapor retarder is required and what type should be used; however, Atlas strongly recommends the use of a vapor retarder with a perm rating of 0.5 or less (i.e., 4 mil polyethylene minimum) on all projects except those in extreme cooling climates. The vapor retarder should be placed over the solid deck. This recommendation is made to prevent excessive moisture (from construction materials or design conditions) from migrating through the roof assembly and causing condensation within the roof system. For more information on vapor retarders, refer to *Guide Details For Atlas Nailable Insulations*.

→ STORAGE OF ACFOAM® NAIL BASE

Factory applied packaging is intended only for protection during transit. When stored outdoors or on the job site, the insulation should be stacked on pallets at least four inches above ground level and completely covered with a weatherproof covering such as a tarpaulin. The temporary factory-applied packaging should be slit or removed to prevent accumulation of condensation. Roof insulation which has become wet or damaged should be removed and replaced with solid, dry insulation.

→ TECHNICAL ASSURANCE

Atlas provides a full-service Technical Department with a LEED Accredited Professional (AP), Registered Roof Consultant (RRC), Construction Documents Technologists (CDT) and Certified Construction Product Representatives (CCPR) on staff.

→ WARNING - DO NOT LEAVE EXPOSED

This product is a polyiso organic plastic foam and will burn if exposed to an ignition source of sufficient heat and intensity, or open flame, such as a welder's torch. Like other organic materials, this product will release smoke if ignited. Do not apply flame directly to ACFOAM® Roof Insulation when installing a torch applied modified bitumen system. This product should be used only in strict accordance with Atlas recommended uses and application instructions.

→ LIMITATION OF LIABILITY

The Seller shall not be liable for any incidental or consequential damages including the cost of installation, removal, repair or replacement of this product. The Buyer's remedies shall be limited exclusively to, at Seller's option, the repayment of the purchase price or resupply of product manufactured by Atlas in a quantity equal to that of the nonconforming product. Atlas distributors, agents, salespersons or other independent representatives have no authority to waive or alter the above limitation of liability and remedies.

→ TYPICAL PHYSICAL PROPERTIES (FOAM PORTION)

PROPERTY	TEST METHOD	TYPICAL RESULTS
Dimensional Stability (Length and Width)	ASTM D 2126	< 2 %
Compressive Strength (10% Deformation)	ASTM D 1621	20 psi (140 kPa) or 25 psi (172 kPa)
Water Absorption	ASTM C 209, ASTM D 2842	< 1 %, < 3.5 %
Moisture Vapor Transmission	ASTM E 96	< 1.0 perm (85.0ng/ (Pa-s-m2))
Product Density	ASTM D 1622	Nominal 2.0 pcf (32.04 kg/m3)
Flame Spread	ASTM E 84 (Full 10 min. Test)	40-60*
Smoke Developed	ASTM E 84 (Full 10 min. Test)	50-170*
Tensile Strength	ASTM D 1623	>730 psf (35 kPa)
Service Temperature	-	-40 to 200° F**

*The numerical ratings as determined by ASTM Test Method E 84 are not intended to reflect hazards presented by this or any other material under actual fire conditions. A flame spread index of 75 or less and smoke development of 450 or less meet code requirements regarding flame spread and smoke development for foam plastic roof insulation. However, the codes exempt foam plastic insulation when used in roof deck constructions that comply as an assembly with FM 4450 or UL 1256 (see IBC, NBC, UBC, and SBC Sections on Foam Plastic Insulation (Chapter 26). Smoke development does not apply to roofing.

**ASTM C 1289 Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.

The physical properties listed above are presented as typical average values as determined by accepted ASTM test methods and are subject to normal manufacturing variation.

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