

## SPECIFICATIONS

Laminated Snap-N-Lock™ Insulated Panels shall be manufactured as by Structall Building Systems, Inc.:

### DESCRIPTION:

Snap-N-Lock Insulated Panels are pressure laminated composites of baked, polyester-coated steel or aluminum coil sheets that have been roll formed to produce a patented locking system, and computer cut and routed expanded polystyrene foam. These elements are vacuum sealed and laminated under pressure utilizing the latest technology, with a waterproof adhesive that has the highest ICBO approved rating. The panel has both structural and insulative properties.

Panels shall be 2" to 8" in overall thickness with an E.P.S. foam core density of 1 lb./cubic foot, supplied by the manufacturer or an approved distributor in widths of 23-1/8" (aluminum) and 48" (aluminum or steel) and lengths up to 40'. Roof pitches as little as 1/4" per 2' can be achieved.

### PHYSICAL PROPERTIES OF E.P.S. INSULATION\*:

Specification Reference: ASTM C578-87a Type 1

Property	Units	ASTM Test	
Density, minimum	(pcf)	D303 or D1622	0.90
Density Range		0.90-1.14	
Thermal Conductivity	at 25F BTU/(br.) at 40F (sq. ft.)(F/in.)	C177 or C518	0.23 0.24
K Factor	at 75F		0.26
Thermal Resistance	at 25 F at 1 inch at 40 F thickness		4.35 4.17
R-value**	at 75 F		3.85
<b>Strength Properties</b>			
Compressive 10%			
Deformation	psi	D1621	10-14
Flexural	psi	C203	25-30
Tensile	psi	D1623	16-20
Shear	psi	D723	18-22
Shear Modulus	psi	-	280-320
Modulus of Elasticity	psi	-	180-220
<b>Moisture Resistance</b>			
WVT	perm. in	E96	2.0-5.0
Absorption (vol.)	%	C272	< 4.0
Capillarity	-	-	none
<b>Coefficient of Thermal Expansion</b>			
	in./(in.)(F)	D696	0.000035
<b>Maximum Service Temperature</b>			
	°F	-	
Long-term exposure			167
Intermittent exposure			180
Oxygen index	%	D2863	24.0

\* Information in chart above obtained through The Society of the Plastics Industry, Inc. and is offered in good faith and believed to be accurate.

\*\* R-value means the resistance to heat flow. The higher the R-Value, the greater the resistance to heat flow.

### MATERIALS:

Panels shall be custom laminated from:

- .024 Aluminum Coil 3105-H-194 Stucco Embossed
- .024 Aluminum Coil 3105-H-194 Cedar Woodgrain Embossed
- .030 Aluminum Coil 3105-H-194 Stucco Embossed
- .26 gauge Galvanized Steel Coated Stucco Embossed ASTM-A527
- .26 gauge Galvanized Steel Coated Smooth ASTM-A527

Samples will be submitted upon request.

### FINISHES:

Panels can be customized with a variety of substrates. Additional finishing materials, like shingles and stucco, can also be applied directly to the skins in the field and are merely for aesthetic reasons.

### PANEL TESTING:

Dimensional inspections are performed in the shop to ensure that length, width, squareness and thickness are within specified tolerances. Further shop testing is done to make sure that the finish, alignment and lamination meets applicable standards. The panels are also put through extensive and rigid testing to ensure they continue to meet or exceed building code requirements for wind, live and dead loads. The SNAP-N-LOCK panel is capable of supporting 57 lbs. live load per sq. ft. combined with various wind loadings up to 150 m.p.h.

Fire testing of the Snap-N-Lock Insulated Panel - Aluminum Clad was performed in accordance with the UL Standard "Fire Test of Interior Finish Material, UL 1715" (UBC 17-5) using the ASTM E84-91a Standard Test Method for Surface Burning Characteristics of Building Materials (ANSI 2.5, NFPA 255). Tests resulted in a flame spread index of 5, and a smoke developed index of 170. Additional fire tests administered to the panel include ASTM-1929, ASTM-119 and ASTM-E84-95. In all these tests the panel exceeded industry standards. Results are available upon request. It is also important to note that the solid core construction of the structural insulated panel eliminates the "chimney effect" that causes fires to spread quickly through stick built walls.

Acoustical testing on the panel's expanded polystyrene foam core has been done in accordance with ASTM E90-61T. The transmission of sound for eps was an STC of 51. A brick wall has an STC of 34 and block an STC of 38 according to ASTM E90-61T data. The higher the STC rating, the better the capability of the construction material to block sound transmissions. Structall Building Systems recommends that the interior walls be constructed of steel studs with a drywall exterior finish. This method of construction has a STC of 36, similar to brick.

### WARRANTY:

STRUCTALL BUILDING SYSTEMS, INC. warrants to the Purchaser that Structall's Metal Panel products will not delaminate as a result of a defect in materials or workmanship for a period of 10 years from the date of purchase. In the event of a valid claim, Structall will provide replacement panels.

### EXCLUSION OF CERTAIN WARRANTIES:

This warranty does not cover damage by willful abuse, normal weathering, negligence or failure to provide normal maintenance and cleaning, exposure to industrial pollution, salt spray or chemical atmosphere, damage by physical abuse, abrasion, impact or other force, or an act of nature, such as fire, lightning, windstorms, hailstorms or causes beyond Structall Building Systems, Inc.'s control.

This warranty does not cover use of the product in applications beyond the design limits as spelled out in the Structall engineering publications. Installation not in strict compliance with the Structall installation instructions shall also void the warranty.

Both steel and aluminum clad panels are subject to corrosion and are specifically not covered beyond any warranty provided by the coil manufacturer. Structall recommends a light pressure wash every year for the underside of any panel roof or panel wall section exposed to, or near by, a salt water environment or a swimming pool or spa where chlorine is used.

This warranty does not cover infestation by insects, rodents or other pests. As with any type of construction, an appropriate pest control program should be instituted and maintained.

### LIMITATION OF REMEDIES:

The Purchaser's sole and exclusive remedy for a valid claim against this warranty shall be for the replacement, without charge to the purchaser, of the Structall panels pursuant to the terms of the warranty. The obligation of Structall Building Systems, Inc. to replace the defective products shall not include the removal, dismantling, or reinstallation of any such products. Furthermore, the Purchaser agrees that no other remedy other than that prescribed above shall be available to the Purchaser or other aligned parties making a claim.

Specifications for the rest of our structural insulated panel line can be obtained by calling Structall Building Systems, Inc.