

PBR PANEL

The PBR panels, designed for roof, exterior wall, soffit and liner panels, in architectural, commercial or industrial settings, consists of fastening the panel utilizing through panel fastening and side lap installation. The panel has 1 ¼" major ribs spaced at 12" o.c., with a total coverage of 36". Panels are fabricated from 22, 24, or 26 gauge steel. Galvalume® coated or painted sheet will provide a long-lasting weathering membrane and has a proven weather resistance in excess of 20 years.

APPLICATION

Roof covering as well as interior and exterior wall covering for new projects or retrofit construction.

PANEL AND FLASHING MATERIALS

The PBR panel is formed of 50,000 psi minimum yield strength. PBR panels are made of 26 gauge steel (80,000 psi) and of 22 and 24 gauge steel, 50,000 psi minimum yield strength (ASTM A792-06a, Grade 50, Class 1), coated with AZ50 (minimum) aluminum/zinc alloy for painted finish or AZ55 aluminum/ zinc alloy for unpainted finish.

The Flashing and trim will be 24 or 26 gauge steel 50,000 psi minimum yield strength (ASTM A792, SS Grade 50, Class 1), coated with AZ50 (minimum) aluminum/zinc alloy for painted finish zinc or AZ55 aluminum zinc for unpainted finish.

FASTENERS

PBR panels may attach to secondary framing (purlins or girts) using self-drilling steel screws, #12 x 1 ¼" hex head w/neo washer. PBR panels attaching to wood decking use #10 x 1 ½" hex head, wood grip w/ washers. Fasteners available for use with up to 8" of blanket insulation. PBR stitch screws, screws at side laps, are ¼" – 14 x 7/8" self-drilling screws w/neo washers.

SEALANTS

All sealants are a 100% solids, asbestos-free butyl tape sealant that is highly rubbery, tacky, reinforced compound designed for sealing metal lap joints. Application temperatures of the sealant is -5° F to 120° F and service temperatures from -40° F to 200° F.

FINISHES

PBR panels available in ACI 2000 (Advanced Exterior Finishes) and ACI 3000 (Premium 70% PVDF Coating System) colors. All ACI 2000 and ACI 3000 KYNAR finishes are provided by Sherwin-Williams® and come with extended finish warranties. Upon request, Energy Star, LEED, and material safety documentation are available.

MAINTENANCE

Routine maintenance is required to maximize the life expectancy of the panel. Routine inspections of the roof, walls, flashings, gutter and fasteners insure that the investment will maximize performance of all new products.

TEST DATA

The PBR panel has been tested to ASTM E1592.

WARRANTY

Up to 20-year material and paint finish warranty information available upon request. No Weather-tightness Warranty available.

PRODUCT NOTES

"Oil-canning," slight waviness inherent in light gauge metal may exist in this panel. This minor waviness does not affect the finish or structural integrity of the panel and is therefore not a cause for rejection.

UL Construction Numbers: 30, 79, 161, 167

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GAUGE	YIELD STRESS (KSI)	WT. (PSF)	STEEL THICKNESS (IN.)	TOTAL THICKNESS (IN.)		
26	80	0.88	0.0180	0.0196		
24	50	1.11	0.0227	0.0243		
22	50	1.32	0.0272	0.0288		
Ga.	Panel Top in Compression (Positive Bending)			Panel Bottom in Compression (Negative Bending)		
	lx (in 4/ft)	Sx (in 3/ft)	Maxo (in.kip s/ft)	lx (in 4/ft)	Sx (in 3/ft)	Maxo (in.kip s/ft)
26	0.0410	0.0409	1.469	0.0343	0.0490	1.761
24	0.0603	0.0624	1.870	0.0473	0.0632	1.893
22	0.0766	0.0823	2.460	0.0600	0.0764	2.290

PBR MAXIMUM TOTAL UNIFORM LOADS IN PSF

Gauge	Span Type	Span Ft.							
		3.0	3.5	4.0	4.5	5.0	6.0	7.0	7.5
26	1	111/-112	81/-70	51/-47	38/-33	28/-24	16/-14	10/-8.8	8.4/-7.2
	2	117/-68	88/-58	69/-51	55/-45	45/-38	31/-27	23/-20	20/-17
	3	141/-77	107/-66	84/-58	67/-51	53/-45	30/-26	10/-16	15/-13

Gauge	Span Type	Span Ft.							
		3.0	3.5	4.0	4.5	5.0	6.0	7.0	7.5
24	1	135/-140	99/-97	76/-65	56/-45	41/-33	24/-19	15/-12	12/-9.9
	2	134/-68	99/-58	76/-51	61/-45	49/-41	34/-33	25/-24	22/-21
	3	164/-77	122/-66	95/-58	75/-51	61/-46	43/-36	28/-22	23/-18

Gauge	Span Type	Span Ft.							
		3.0	3.5	4.0	4.5	5.0	6.0	7.0	7.5
22	1	172/-161	126/-116	97/-77	70/-54	51/-39	29/-22	18/-14	15/-11
	2	156/-68	116/-58	89/-51	70/-45	57/-41	40/-34	29/-29	25/-27
	3	193/-77	143/-66	110/-58	88/-51	71/-46	50/-38	35/-27	28/-22

- Section Properties have been calculated in accordance with Supplement 2004 to the North American Specification, 2001 Edition, for the Design of Cold-Formed Steel Structural Members.
- Steel Panels have a protective coating of either aluminum-zinc alloy or G-90 galvanizing.
- The base steel thickness was used in determining section properties.
- Minimum Yield Strength of 22 and 24 gauge steel 50,000 psi. Minimum Yield Strength of 26 gauge steel 80,000 psi.
- The deflection loads were calculated from a deflection limit of Span/180 for structural roof panels.
- The loads shown do not include allowance for the panel weight.
- Positive Load is applied inward toward the panel supports and is applied to the outer surface of the panel cross-section. Negative Load is applied in the opposite direction.