

TECFOAM™ INSULATED PANELS

IPS manufactures a complete line of foamed-in-place insulated panels for both roof and wall applications. Our products have undergone careful research and development including extensive testing. The roof and wall panels are available up to five inches thick to maximize thermal efficiency and spanning capabilities.

The low profile structure and concealed fastener features of the wall panels combine to provide aesthetically pleasing products for architectural applications. The unique IPS Rockwall Coating can be applied to the face of the wall panels which gives you the strength of a steel product and the natural beauty of the stone aggregate. For a stucco-like appearance, a 100% acrylic based textured finish can be spray-applied to the exterior face to provide architectural appeal.

Another unique product offered by IPS is the nominal 36" wide Standing Seam Roofing Panel with VersaLok™. The seam of the panel is a full 2 7/8" from the flow of water to provide optimum protection against water penetration. The system is held in place with concealed clips and qualifies under UL and FM wind uplift test procedures.

The versatile RWP panel can be installed as a roof or wall panel in conventional or engineered building construction. It has also been tested for wind uplift resistance.

SSP STANDING SEAM PANEL WITH VERSALOK™

The SSP roof panel system is ideal for temperature controlled environments. The panel is available in thicknesses of 2", 2 1/2", 3", 4" and 5" with a maximum R-Value of 39.5. The 36" width provides for quick installation of both the interior liner and exterior skins of the building. The interior skin of the panel is typically manufactured from 26 gauge material and is also available in 24 or 22 gauge. The exterior skin of the panel is 24 gauge but can be provided in 22 or 26 gauge. Factory Mutual wind uplift approval has been received using 26 gauge material. The maximum recommended length for the SSP Panel is 35' 0". Contact IPS for panel length options.

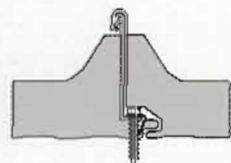
With the patented VersaLok™ sidelap, the panels snap together before being mechanically seamed. Contractors do not have to seam the panels as they are installed. A building can be covered quickly and efficiently. However, to comply with FM and UL approval requirements, the sidelap must be field seamed using a mechanical seamer provided by IPS. The system can be installed over standard metal building purlins or bar joists.

Panels are attached with concealed two piece clips and have been tested extensively for wind uplift resistance.

The panel qualifies for a UL 580 Class 90 and Factory Mutual 1-90 rating. In addition, the SSP panel has been tested under the ASTM E1592 uplift procedure receiving excellent results. Please contact IPS for specific design and installation parameters.

The VersaLok™ sidelap has also been tested for air infiltration and water penetration to provide for a secure weather tight connection. The sidelap of the outside skin contains factory applied sealant. Sealant must be applied in the field to the tongue and groove connection of the interior skins.

The exterior panel skin is typically smooth but can be provided with the embossed texture as an option for roof slopes greater than 2 on 12. The interior skins are embossed and rollformed with our standard interior Mesa profile.



SSP Panel Joint

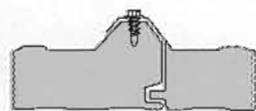


RWP ROOF OR WALL PANEL

The RWP Panel functions well as a roof or wall panel when used in conjunction with engineered building framing systems. The product features an overlapping major rib at the panel sidelap. Exposed fasteners are located in the major ribs when the panel is used as a roof and in the pan when the panel is used in a wall application.

The RWP Panel has 36" net coverage with major ribs located 12" on

center. Two minor ribs occur between the major ribs. The product is typically offered with 26 gauge steel interior and exterior skins. 24 and 22 gauge material is optional. The panel thickness is available in 1 1/2", 2", 2 1/2" and 3" with a maximum R-Value of 22.3. The exterior skin is smooth as a standard and can be embossed as an option. The interior skin is embossed and roll formed with our standard interior Mesa profile. The maximum recommended length for the RWP Panel is 35' 0". Contact IPS for panel length options and regarding availability of 4" and 5" thick panels.



RWP Roof or Wall Panel Joint



ESP WALL PANEL

This architecturally pleasing panel is ideal for applications that require a flat appearance. Minor striations in the exterior skin provide for a linear appearance in vertical applications while blending with the side joint of the panels. An embossed texture in the interior and exterior skins of the panel is standard.

The ESP panel can be specified in thicknesses of 2", 2 1/2", 3", 4" and 5" achieving a maximum R-Value of 40.0. Net coverage can be 36" or 42". The maximum recommended length of the panel is 30' 0". Contact IPS for panel length options. IPS offers standard details for stack joint applications on walls over 30' high. The exterior panel skin is typically manufactured from 24 gauge steel. 22 gauge material is available as an option. The interior Mesa profile is 26 gauge as a standard.



ESP Wall Panel

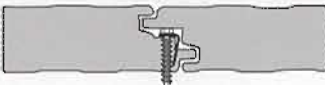
This architectural panel is installed with a concealed clip attachment to structural members.



IPP WALL/PARTITION PANEL

This attractive flat wall panel utilizes the Mesa profile on both panel surfaces. The panel is produced in thicknesses of 2", 2 1/2", 3", 4" and 5" achieving a maximum R-Value of 40.0. The product is designed for interior partition as well as exterior wall applications. A concealed clip is used to attach the panel to structural members. The

IPP panel is available with a net coverage of 36" or 42". A 24 gauge exterior skin with a 26 gauge interior is typical for wall applications. Partition panels are provided with 26 gauge material for both skins. Other combinations of 26, 24 and 22 gauge steel are available. Panel skins are embossed. The maximum recommended panel length is 30' 0". Contact IPS for panel length options.



IPP Wall Panel



ABP WALL PANEL

The ABP Wall Panel is similar in appearance to the IPP panel. The exterior profile is asymmetrical with expanded flat areas to reduce shadow lines. As with all IPS panels, the interior skin is fabricated in the Mesa profile.

The product is available 2", 2 1/2", 3", 4", or 5" thick and can achieve R-Values to 40.0. The manufactured net width can be 36" or 42". Typical embossed exterior skins are provided in 24 or 22 gauge steel. The maximum recommended length for the ABP Panel is 30' 0". Contact IPS for panel length options. Panel connections are made into structural members with concealed clips and fasteners.



ABP Wall Panel



EWP WALL PANEL

EWP panels offer contemporary styling in an easily installed product that is manufactured in thicknesses of 2", 2 1/2", 3", 4" and 5". R-Values up to 34.6 can be achieved. Panel net coverage is 36". The IPS standard material offering for the panel skins is 26 gauge steel. 24 and 22 gauge steel is optional. The maximum recommended length for the EWP panel is 30' 0". Contact IPS for panel length options.

The profile gives any building a strong vertical accent that is ideal for engineered and conventional building construction. Minor flutes in the flat surface of the profile are standard and are designed to aid in reducing the potential for waviness or oil canning. The EWP panel is also available without the minor flutes as an option. Panel skins are embossed.



EWP Wall Panel

The EWP panel is easily attached to structural members through the use of concealed clips.



ROCKWALL COATING

The IPS Rockwall Coating gives you the advantage of steel wall panel construction with the durable beauty of stone aggregate. The Rockwall coating process bonds real stone aggregate to the steel panels with a super adhesive system.

IPS not only applies the Rockwall Coating to insulated wall panels, but to single skin panels as well. Trim that is used in conjunction with the panels can also receive the aggregate coating. The maximum recommended length for Rockwall coated products is 20'-0".

The color "Graniterock" is a mixture of several earth tone colors and is a generic light brown color.

Note: The Rockwall Coating is made of natural aggregate stone. The appearance of the product will vary due to 1) the mixture of the minerals in the rock and 2) the location from which each batch of rock is mined. A color difference may occur from one panel to the next and possibly within the same panel due to the natural color variation of the stone itself. Panel installation, light reflection, and weathering does have a bearing on the overall appearance of the finished product. None of the above is a cause for rejection of the coating.



TEXTURED FINISH

IPS also offers a 100% acrylic based textured finish that has a stucco-like appearance. The finish is offered on the IPP, ESP, ABP and EWP insulated wall profiles and is designed to add architectural appeal to the exterior surface of the panels.

The product is applied and cured at the IPS facility in a controlled temperature environment to ensure excellent adhesion. This allows for insulated panels with a stucco look to be installed in cold climates and adverse weather.

Mildew resistant and dirt pick-up resistant technology within the finish provides for low maintenance. Moisture does not penetrate the metal skins of the panel and cannot collect within the panel itself to affect structural integrity. The 93% closed cell foam core that is exposed at cut edges does not absorb water.

The finish is available in five standard colors and can be applied on panels up to 20'-0" in length.



FEATURES

TecFoam™ panels are manufactured from Galvalume or galvanized coated steel. The non-CFC polyurethane modified isocyanurate foam core bonds the steel faces together to create a product that offers superior strength and thermal efficiency. Each insulated panel utilizes the embossed IPS Mesa profile as an interior skin. The steel faces of the wall panels are typically embossed to minimize the potential for waviness or oil canning.

PRODUCT PARAMETERS

A certain amount of waviness, called "oil canning", is inherent in any product made from coiled sheet metal. Any flat area has the potential for oil canning. Oil canning is cosmetic only, does not affect the structural integrity of the panel and is not cause for rejection.

"Blisters" can sometimes occur when the exterior face of the panel is exposed to the sun. This condition is caused by the thermal expansion of the blowing agent trapped under the panel face and is a common phenomenon of foamed-in-place panels. Blisters are easily repaired and are not cause for product rejection.

SUPPORT INFORMATION

IPS can furnish complete design information in the form of standard details and load tables. CSI format specifications and details are available on CD. Shop drawings can be prepared for individual projects to ensure compliance with IPS standards.

TRIM AND ACCESSORIES

Trim associated with each panel profile is manufactured from the same material and gauge as the panel. IPS carries a complete supply of fasteners and hardware for the insulated panels.

TESTING

The IPS insulated panels have achieved excellent results under the following test procedures:

- Thermal Resistance – ASTM C236
- Ignition Properties – ASTM D1929
- Surface Burning – ASTM E84
- Room Fire Test – Factory Mutual Standard 4880
- Roof Deck Fire Test – UL 1256
- Roof Covering Fire Test – ASTM E108
- Air Leakage – ASTM E283
- Water Penetration – ASTM E331
- Strength – ASTM E72
- Wind Uplift (SSP) – UL 580, FMRC Std. 4471, ASTM E1592

MATERIALS AND COATINGS

Signature® 300 This fluorocarbon paint system combines ceramic pigmentation with polyvinylidene fluoride (70% of resin solids) for a superior, long-lasting finish. Outstanding performance and durability are achieved through this proprietary resin technology. The finish offers the ultimate in color retention, film flexibility and durability.

Signature® 200 The Signature® 200 paint system offers optimum exterior protection and resistance to chemical corrosion and ultraviolet radiation. This coating also offers excellent chalk, fade and mar resistance.

USDA White Paint As a standard, insulated panels are offered with a USDA white paint finish on the interior skins for food processing or storage projects.

Galvalume Plus® Galvalume material has a corrosion resistant aluminum-zinc alloy applied by a continuous hot-dipping process that conforms to ASTM A792 in coating class AZ55. A clear acrylic coating is applied to the Galvalume to create Galvalume Plus®.

Warranties Signature® 300, Signature® 200 and Galvalume Plus® are each warranted under exposure to normal atmospheric conditions for a period of 20 years.

Contact IPS for a panel color and finish guide.



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TecFoam™

Insulated Roof & Wall Panel Systems

HCFC FOAM SYSTEM

SSP ROOF PANEL



PRODUCT CODE	"T" THICKNESS	"U" FACTOR	"R" FACTOR
SSP 200	2"	.067	14.9
SSP 250	2-1/2"	.053	19.0
SSP 300	3"	.043	23.1
SSP 400	4"	.032	31.3
SSP 500	5"	.025	39.5

RWP ROOF OR WALL PANEL



PRODUCT CODE	"T" THICKNESS	"U" FACTOR	"R" FACTOR
RWP 150	1-1/2"	.082	12.2
RWP 200	2"	.064	15.6
RWP 250	2-1/2"	.053	18.9
RWP 300	3"	.045	22.3
RWP 400	4"	.034	29.0
RWP 500	5"	.028	35.7

ESP WALL PANEL



PRODUCT CODE	"T" THICKNESS	"U" FACTOR	"R" FACTOR
ESP 200	2"	.063	16.0
ESP 250	2-1/2"	.050	19.9
ESP 300	3"	.042	23.9
ESP 400	4"	.031	31.9
ESP 500	5"	.025	40.0

EWP WALL PANEL



PRODUCT CODE	"T" THICKNESS	"U" FACTOR	"R" FACTOR
EWP 200	2"	.072	13.9
EWP 250	2-1/2"	.058	17.3
EWP 300	3"	.048	20.8
EWP 400	4"	.036	27.7
EWP 500	5"	.029	34.6

IPP WALL/PARTITION PANEL



PRODUCT CODE	"T" THICKNESS	"U" FACTOR	"R" FACTOR
IPP 200	2"	.063	16.0
IPP 250	2-1/2"	.050	19.9
IPP 300	3"	.042	23.9
IPP 400	4"	.031	31.9
IPP 500	5"	.025	40.0

Roof and wall panels are manufactured to the following specifications:

- Exterior faces are 22-, 24- or 26-gauge aluminum zinc alloy coated steel, AZ55 coating class, conforming to ASTM A792.
- Interior faces are 22-, 24- or 26-gauge steel G60 (min.) coating class, conforming to ASTM A653 or aluminum zinc alloy coated steel, AZ50 coating class, conforming to ASTM A792.

- Insulating foam core is a foamed-in-place rigid modified isocyanurate using an HCFC blowing agent and has the following physical properties:

1. Density: 2.0 pcf (nom.)
2. Compressive strength: 23 psi
3. Tensile strength: 39 psi
4. Shear strength: 26 psi
5. Closed cell: 93%
6. Cold aging: 1% volume decrease after 7 days at -20°F
7. Heat aging: 3% volume increase after 28 days at 200°F
8. Humid aging: 4% volume increase after 28 days at 158°F and 100% R.H.

- Trim and flashing are formed sheet metal that matches the thickness and finish of the panel faces.

- All exposed fasteners are stainless steel, stainless steel clad, aluminum or cast zinc-aluminum alloy painted to match panel colors.

- Panel exterior faces are coated with a siliconized polyester or 70% Resin Kynar finish system. Contact IPS for color selection and availability.

- Panel Interior faces are coated with a white USDA approved paint system. Other colors and finishes are available.

- SSP Standing Seam Panel with VersaLok® is an IPS exclusive. This roofing panel has unique features not available from any other source.

Note: Insulation values determined by tests conducted in accordance with ASTM C 236 at a mean temperature of 75°F, winter condition corrected to 15 mph outside and still inside.