

SIP Supply's (PUR)manite™ Performance Wall is a structural-grade stress skin panel for use in specialty building applications.

(PUR)manite-X™ Metal Skinned Panels

Stainless Steel and G90 Galvanized are the most common requested metal surfaces. These products when used in a SIP provide structural integrity and strength. There are more than 60 grades of stainless steel. SS is essentially low carbon steel containing chromium at 10% or more by weight. The addition of chromium gives the steel its unique stainless, corrosion resisting properties. Over the total life of a project, stainless is often the best value option. Benefits of Stainless Steel: Corrosion resistance, Fire and Heat resistance, Hygiene, Aesthetic appearance, Good strength-to-weight advantage, Impact resistance and excellent long term value.



Panels are manufactured by injecting two part polyurethane foam into a frame press. The injected foam chemically reacts, creating heat and pressure, filling the core of the panel. The expanding foam bonds directly to the skins, cures and forms a solid, durable, efficient, high strength building component.

The injected urethane panels are stronger than a standard wall system. This remarkable strength is achieved through permanent bonding of structural panel components (SS/G90) on each side of a high-density urethane core. SIP Supply's unique manufacturing technique provides additional strength by foaming into each panel structural components called splines adding stability and strength. Special steel "Cam-Locks" join the panels tightly together creating an airtight wall. Unique profile edges and "foamed in place" headers assure components fit together tightly. SIPs polyurethane foam mixture provides a Class 1 panel that does not contribute to flame spread making the structures safer. Electrical and cable chases can be imbedded inside the panels for ease of wiring. Doors and windows can be installed in the plant before shipping reducing construction costs and time. Or door and window openings can be placed in a panel for onsite installation.

BENEFITS

- Energy savings
- Faster construction
- Stronger structures
- Quieter

Width: Maximum is 4'-0" (120 cm)

Height: Standard is 8'-0", 10'-0", 12'-0", 16'-0"

Thickness: 3-0" R22

4 ½" R28 (construction standard)

6 ½" R42 (construction standard)

*Special pricing is available for non-standard sizes.



SIP Supply, LLC
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SIPSupply.com
SIPdesigns.com
1-478-285-2256

Factories in:
GA, FL, NC, CO

DIMENSIONS AND PHYSICAL PROPERTIES

OUTER SURFACE	G90 galvanized or Stainless
INNER SURFACE	G90 galvanized or Stainless
INSULATION CORE	Polyurethane, 2.50-lb/ft ² density, Class 1, closed cell foam.

Note: This foam insulation contains no formaldehyde or formaldehyde-related chemicals.

ADHESION: A strong and durable bond exists between foam and skins. Heat and pressure created by the chemical reaction of the expanding foam forces complete adhesion of the foam core to the skins.

DIMENSIONS AND WEIGHT:

Overall Thickness	4-1/2" (11.3 cm)
Thickness Tolerance	± 1/16" (.156 cm)
Standard Width	4'-0" ±1/16" (120 cm)
Standard Lengths (ft)	8'-0" (240 cm), 10'-0" (300 cm), 12'-0" (360cm), 16'-0 (480 cm)
Length Tolerance	±0/ -1/16" (.156 cm)
Weight (lb)	Varies-skin (Avg. 3.9#/ft)

STRUCTURAL PROPERTIES OF FOAM:

Compressive Strength	35 psi
Compressive Modulus	790 psi
Tensile Strength	16 psi
Tensile Modulus	325 psi
Shear Strength	26 psi
Shear Modulus	325 psi

THERMAL PERFORMANCE:

Conductivity of Foam	.13-.15 (Btu-in/ft ² hroF)
Minimum R-Value	28 (Ft ² hroF/Btu)

MOISTURE:

Vapor Permeability	2 perm/in	Moisture Absorption	2.4%
Resistance to Solvents	Excellent	Resistance to Mold/Mildew	Excellent

FIRE SAFETY:

Finish Rating	Standard 15-minute finish rating w/Fiber Cement. 1/2 " (1.25 cm) Sheetrock facing required for OSB
Foam Fire Rating	Class 1
Smoke Developed	<400 (ASTM E-84)
Flame Spread	<25 (ASTM E-84)

STRUCTURAL INTEGRITY IN FIRE CONDITIONS:

Polyurethane foam is a "thermo-set" plastic. It retains its structural integrity until completely consumed by fire. Melting does not occur.

TOXICITY OF COMBUSTION:

Dangerous gasses may be given off in a fire. Combustion products are similar to those produced by burning wood.



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