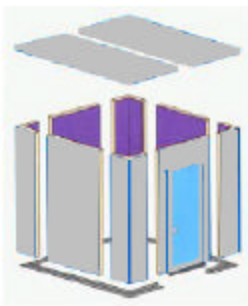


ICS-Performance Wall METAL/METAL

TECHNICAL SPECIFICATIONS

ICS Performance Wall is a structural-grade stress skin panel for use in residential and commercial construction.

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 a low carbon steel containing chromium at 10% or more by weight. The addition of chromium give 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 a two part urethane 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. ICS'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. ICS urethane 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" (240 cm), 10'-0" (300 cm),
12'-0" (360 cm), 16'-0" (480 cm)

Thickness: 3-0" R22 (7.53 cm)

4 ½" R28 (11.3 cm) (construction standard)

6 ½" R42 (16.3 cm) (construction standard)

*Special pricing is available for non-standard sizes.

Structural Panels Uses

- Remote Offices
- In Plant Offices
- Environmental Rooms
- Garages
- Reduced Noise Offices
- Refrigeration Buildings
- Agricultural Buildings
- Storage Buildings
- Quick Lube Buildings
- Oil Change Buildings
- Electronic Equipment Protection
- Power Generation Site Shelters
- Residential Homes
- Roofs for Log Homes
- Curtain Wall
- Car Washes
- Utility Buildings
- Equipment Shelters



INSULATED COMPONENT STRUCTURES, INC.

323 Farmington Road, Mocksville, NC 27028

Ph: 336-940-2575 FAX: 336-940-2508

Info@ics-sips.com www.ics-sips.com

DIMENSIONS AND PHYSICAL PROPERTIES

- OUTER SURFACE:** G90 galvanized or Stainless
- INNER SURFACE:** G90 galvanized or Stainless
- INSULATION CORE:** Polyurethane, 2.50-lb/ft² 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	3'-0" (7.53 cm); 4'-1/2" (11.3 cm)
	6'-1/2" (16.3 cm)
Thickness Tolerance	± 1/16" (.156 cm)
Standard Width	4'-0" ±1/16" (120 cm)
Standard Lengths (ft)	8'-0" (240 cm), 10' (300cm), 12' (360cm), 16' (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 hr°F)
(aged 6 months)	
Minimum R-Value	28 (Ft ² hr°F/Btu)
(aged 6 months)	

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.

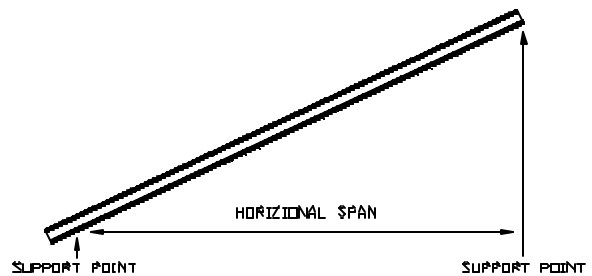
TOXICITY OF COMBUSTION:

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

OSB/OSB Panel ASTM E 72-98 Testing

WALL LOAD TABLE
(ALLOWABLE AXIAL LOADS (PSF))

WALL HEIGHT	13 PSF	16 PSF	20 PSF	23 PSF	25 PSF
4'	7800	7700	7600	7525	7475
5'	7525	7400	7225	7100	7025
6'	7150	6975	6725	6575	6475
7'	6675	6450	6150	5575*	5150*
8'	6150	5500*	4525*	3800*	3325*
9'	4875*	4050*	2950*	2125*	1575*
10'	3600*	2675*	1450*	550*	
11'	2425*	1400*	75*		
12'	1325*	225*			



ROOF SPAN TABLE (FT/IN) HORIZ LOAD
UNIFORM LOAD (LIVE PLUS DEAD LOAD)

DEFLECT LIMITS	20 PSI	30 PSI	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI
L/180	12'4"	10'3"	9'0"	8'0"	7'3"	6'7"	6'1"
L/240	11'0"	9'2"	7'10"	6'10"	6'2"	5'7"	5'2"
L/360	9'0"	7'4"	6'3"	5'4"	4'9"	4'3"	
L/480	7'9"	6'2"	5'2"	4'5"			