

# Amvic ICF Product Specification Sheet

## Manufacturer

Amvic Building System

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## Product Description

Amvic Insulated Concrete Forms (ICFs) are stay-in-place forms manufactured using two 2.5" panels of Type 2 1.5lb/cf density Expanded Polystyrene (EPS) held together by polypropylene webs placed 6" on center. The forms offer a "5 in 1" system that provides structure, insulation, vapor barrier, sound barrier and attachments for drywall and exterior siding in one.

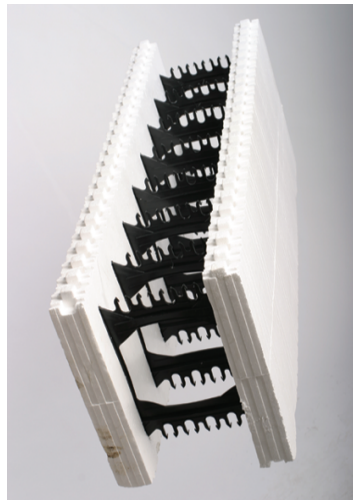
Completed Amvic ICF walls offer an R-Value of 22+, a performance R Value of 50+ when concrete thermal mass is included, an STC rating of 50+ and a fire rating of 3 hrs+ (for a 6" core or more).

Type of ICF: Flat Wall  
Raw Materials: BASF BF or BFL 327 beads, polypropylene

Methods of Manufacturing: Molded raw beads through pressurized steam, Injection molded webs

## Product Features

Amvic ICFs offer the following features which ensure exceptional quality as well reduce construction time and labour costs.



- **Form Capacity Strength of 865 lbs./sq.ft.**
- Fully reversible FormLock™ interlocking system with a depth of 1" which provides superior connection strength
- Webs have built-in clips which can hold 2 courses of reinforcing steel and place it most effectively to maximize structural strength
- Can withstand internal vibration
- Manufactured with over 60% recycled materials
- Generates less than 1% construction waste
- Can contribute up to 28 LEED points

## Applications

Amvic ICF can be used both below and above grade for single and multi-storey residential, commercial, institutional and industrial construction.

## Code Approvals

Amvic is approved by the following agencies:

- ICC-ES Report #1269
- CCMC Report #13043-R
- Bahamas Ministry of Works & Utilities. Report #MOW&U/BC/24/14
- City of Los Angeles, CA. Report #25477
- Ontario Ministry of Municipal Affairs & Housing, Report #02-02-89
- State of Florida
- State of Wisconsin

## Technical Information and Support

Amvic has a comprehensive ICF Technical & Installation Manual available in print, on CD and on our website which covers detailed installation and technical information. Additional technical information is available on our website. If you require any other technical support please do not hesitate to contact our engineering department at 1 877 470 9991 ext 129.

## Availability

Amvic ICFs are produced at multiple locations across North America and are available for purchase through Amvic's extensive network of Authorized Distributors.



# Amvic ICF Product Specification Sheet

USA		
Expanded Polystyrene in accordance with ICBO ES AC12 "Acceptance Criteria for Foam Plastic Insulation" In Conjunction with ASTM C578-95	Requirement	Amvic Results
<b>1 - Expanded Polystyrene Testing ASTM C578-95</b>		
Density (ASTM C 1622-98)	1.35 lbs/ft <sup>3</sup>	1.5 lbs/ft <sup>3</sup>
Thermal Resistance (ASTM C 177-97)	4.0 F.ft <sup>2</sup> .h/Btu	4.0 F.ft <sup>2</sup> .h/Btu
Compressive Strength (ASTM D 1621-94)	15.0 psi	19.8 psi
Flexural Strength (ASTM C 203-99)	40.0 psi min.	42.57 psi
Water Vapor Permeance (ASTM E 96-94)	200 max ng/Pa.s. s <sup>2</sup>	130.1 ng/Pa.s.s <sup>2</sup>
Water Absorption (ASTM C272-91)	3.0% by vol max	2.95%
Dimensional Stability (ASTM D 2126-94)	2.0% max	0.52%
Limiting Oxygen Index (ASTM D 2863-97)	24% min	37%
Trueness and Squareness (ASTM C 550-95)		
Edge Trueness	0.03125 in/ft max	0.0197 in/ft
Face Trueness	0.03125 in/ft max	0.0197 in/ft
Length and Width Squareness	0.0625 in/ft max	0.0295 in/ft
<b>2 - Plastic Tie Testing ICBO ES AC116</b>		
Fastener Withdrawal (ASTM D1761-99)	N/A	39.61 lbs Safety Factor of 5
Fastener Shear Strength (ASTM D1761-99)	N/A	60.22 lbs Safety Factor of 3.2
Tensile Strength (ASTM D638-99)	N/A	810 lbs at Ambient Temperature
<b>3 - Fire Testing</b>		
Room Fire Test (UBC 1997 26-3)	N/A	Passed/Complied
<b>Other Testing</b>		
<b>A - Flammability ASTM E 84</b>		
Flame Spread	25 max	25 or less
Smoke Developed	450 max	450 or less
<b>B - Fire Burning Characteristics of Plastic Ties</b>		
Ignition Temperature (ASTM D1929-68 (1975)	329 (C) 650 (F) min	400 (C) 752 (F)
Burn Rate (ASTM D635-98)	40 mm/min max	20.2 mm/min
Smoke Density (ASTM D2843-93)	75%	25.80%

CANADA		
Expanded Polystyrene In Accordance with Canadian Construction Material Center (CCMC) Technical Guide for "Modular Expanded - Polystyrene Concrete Forms" Master Format Section 03131 "		
<b>1 - Expanded Polystyrene Testing CAN/ULC S701-97, Type II</b>		
Thermal Resistance (ASTM C177-97)	0.7 m <sup>2</sup> .OC/W min	0.7 m <sup>2</sup>
Water Vapor Permeance (ASTM E 96-94)	200 Ng/Pa.s. s <sup>2</sup> max	130.1 Ng/Pa.s. s <sup>2</sup> max
Dimensional Stability (ASTM D 2126-94)	1.5% max	0.52%
Flexural Strength (ASTM C 203-99)	240 KPa min	314.6 KPa
Water Absorption (ASTM D2842-97)	4.0% by vol max	0.93%
Compressive Strength (ASTM D 1621-94)	110 KPa min	136.5 Kpa
Limiting Oxygen Index (ASTM D 2863-97)	24% min	37%
<b>2 - Plastic Web Testing CCMC Technical Guide</b>		
Tensile Strength (ASTM D638-99)	N/A	810 lbs
Fastener Withdrawal (ASTM D1761-99)	N/A	198.04 lbs
Fastener Shear Strength (ASTM D1761-99)	N/A	226.08 lbs
<b>3 - Forming Capacity Test section 6.4.4 of CCMC Technical Guide for Modular Expanded Polystyrene</b>		
Forming Capacity	40 KPa (835 lbs/ft <sup>2</sup> )	41.4 Kpa (865 lbs/ft <sup>2</sup> )
<b>Other Testing</b>		
1 - Flammability CAN.4-S102.2		
Flame Spread	N/A	210
Smoke Developed	N/A	400-450
<b>CANADA &amp; USA</b>		
<b>1 - Fire Resistance Rating CAN/ULC S101-M89 and ASTM E119</b>		
6 in wall with Drywall	N/A	3 hrs +
<b>2 - 15 Minute Stay in Place Fire Test CAN/ULC S101-04 and ASTM E119-00a</b>		
6 in wall with drywall	N/A	Passed/Complied

## Specifications Chart

Product	Core	Form Dimension	Concrete Volume/Form	Concrete Volume/sq ft	Surface Area/Form
Straight Reversible Block	4"	48" x 16" x 9"	0.066 cu-yd	0.012 cu-yd	5.33 ft <sup>2</sup>
	6"	48" x 16" x 11"	0.099 cu-yd	0.019 cu-yd	5.33 ft <sup>2</sup>
	8"	48" x 16" x 13"	0.132 cu-yd	0.025 cu-yd	5.33 ft <sup>2</sup>
90 Corner Reversible Block*	10"	48" x 24" x 15"	0.247 cu-yd	0.031 cu-yd	8 ft <sup>2</sup>
	4"	[24.5" + 12.5"] x 16" x 9"	0.037 cu-yd	0.009 cu-yd	4.11 ft <sup>2</sup>
	6"	[26.5" + 14.5"] x 16" x 11"	0.059 cu-yd	0.013 cu-yd	4.56 ft <sup>2</sup>
45 Corner Reversible Block*	8"	[28.5" + 16.5"] x 16" x 13"	0.083 cu-yd	0.017 cu-yd	5.00 ft <sup>2</sup>
	10"	[42.5" + 18.5"] x 24" x 15"	0.225 cu-yd	0.022 cu-yd	10.17 ft <sup>2</sup>
	4"	[21" + 9"] x 16" x 9"	0.036 cu-yd	0.009 cu-yd	3.33 ft <sup>2</sup>
Taper Top Block	6"	[21.25" + 9.25"] x 16" x 11"	0.05 cu-yd	0.015 cu-yd	3.38 ft <sup>2</sup>
	8"	[22" + 10"] x 16" x 13"	0.068 cu-yd	0.019 cu-yd	3.56 ft <sup>2</sup>
	6"	48" x 16" x 11" - 9.5" * top	0.108 cu-yd	0.02 cu-yd	5.33 ft <sup>2</sup>
Brick Ledge Block	8"	48" x 16" x 13" - 11.5"*	0.141 cu-yd	0.026 cu-yd	5.33 ft <sup>2</sup>
	6"	48" x 16" & 5" **	0.134 cu-yd	0.025 cu-yd	5.33 ft <sup>2</sup>
	8"	48" x 16" & 5" **	0.167 cu-yd	0.031 cu-yd	5.33 ft <sup>2</sup>
	8"-6"	48" x 16" & 4.5" **	0.157 cu-yd	0.029 cu-yd	5.33 ft <sup>2</sup>

\*Concrete width at top \*\*Brick ledge space

