Be free to create: Polycrete®, a durable choice

Insulated Concrete Form (ICF) systems for concrete building solution have evolved over the last two decades.

Our mission

To conceive and promote methods and solutions to facilitate the construction of all types of buildings by using insulating formworks for concrete and in respect of the environment while keeping a high level of quality of products, training and services.

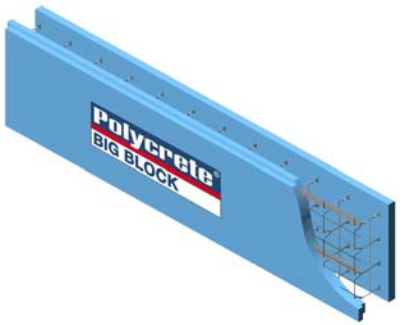
Our vision

By 2020, a significant portion of the residential and commercial building market will be built from insulating formworks for concrete, replacing the conventional wood structures that will be costly and inefficient on an ecological and performance point of view.

Polycrete® Big Block 1200 system

Insulated Concrete Form (ICF) systems for concrete building solution have evolved over the last two decades. The new Polycrete® Big Block 1200 ICF system introduces a revolutionary solution with its sturdiness, performance and fast installation.

The Polycrete® Big Block 1200 ICF system is manufactured with a reinforcing steel mesh embedded within the expanded polystyrene (EPS). This steel wire mesh incorporated within the EPS panel results in extreme strength and unmatched wall stability.



The Polycrete® Big Block 1200 ICF is the largest on the market. At 16 square feet of wall (1.49 m^2), its large size and simple design result in a fast and economical installation process.

The Polycrete® Big Block ICF product is the only system on the market that resist to a lateral pressure of 1200 lbs/sq ft (57.5 kPa) during concrete pour. It brings incomparable performances for ICF installation and concrete pour, but also a significant energy saving. The Big Block is definitively adding values as it gives security, durability, quietness and comfortable buildings. All materials used in a Polycrete® ICF wall bring thermal insulation performances above all required standards.

The Polycrete® Big Block 1200 ICF definitely brings an added value to any construction: security, durability, sound proofing and comfort while being green.

Polycrete®

Big Block 1200 Insulated Concrete Form (ICF)

A positive impact with LEED® Canada for home

The increasing interest in durability in building conception and operation, which we are part of, is well represented by the North American *Leadership in Energy and Environmental Design* (LEED®) evaluation system.

This document explores the potential contribution of the Polycrete products use for a LEED® Canada for home Version 1.0 project. This system is based on 136 points allocated in eight credit categories. The LEED® Canada for home is part of an evaluation system family for different construction project types. Furthermore, a material cannot be certified or bring a certification to a project on its own; the LEED certification is given to a project as a whole based on its conception and on the synergy between all its components.

Summary of the LEED® Canada- for home V.1.0 system			
Category	**Prerequisite**	**Credits**	**Points**
ID	3	3	11
LL	0	6	10
SS	2	6	22
WE	1	3	15
EA	2	11	38
MR	3	3	16
EQ	7	10	21
AE	1	2	3
Total	**7**	**34**	**136**

Contribution of the Polycrete® Big Block 1200 system	
Category	**Contribution**
ID	2 points
LL	0 point
SS	1 point
WE	0 point
EA	Up to 34 points
MR	3 points
EQ	0 point
AE	0 point
Total	**Up to 40 points**

LEED® Canada for home credit categories:

ID: Innovation and Design Process
SS: Sustainable Sites
EA: Energy and Atmosphere
EQ: Indoor Environmental Quality
LL: Location and Linkages
WE: Water Efficiency
MR: Materials and Resources
AE: Awareness and Education

Table: contribution of the Polycrete® Big Block 1200 system to LEED® Canada for home version 1.0

Target credits	Durable strategies	Potential points	Credit implementation	Credit requirements	Contribution and compliance of the Polycrete® Big Block 1200 system
SS 5	Non-toxic Pest Control	1	Synergy	Use noncellulosic (i.e., not wood or straw) wall structure. Use solid concrete foundation walls or masonry walls with top course of solid block bond beam or concrete-filled block.	The **Polycrete® Big Block 1200 system** can contribute to fulfill the requirements of this credit. The EPS forms protect the foundation and skeleton concrete. EPS is an inert, doesn't decompose and is very weather resistant even in extreme conditions. The fact that **Polycrete®** forms are installed in a continuous way from the foundation to the wall and that they are linked together through the concrete allows them to protect the structure from termites and other pest.
EA 1.1	Optimize Energy Performance	Required	Direct	Meet performance of ERS 76 or HERS 80. In the Energy and Atmosphere (EA) category of LEED Canada for home, two paths are possible. If one chooses the EA1 credit, one must not comply with and cannot get credits EA2 to EA10.	The **Polycrete® Big Block 1200 Insulated Concrete Forms (ICF)** eliminate air leakage and thermal bridges. Their R-22 isolation factor for a 6" thick concrete wall with interior and exterior finishing allow for an important energetic performance.
EA 1.2 or EA 1.3	Exceptional Energy Performance in ERS or in HERS	Up to 28 or up to 34	Direct	Exceed performance of ERS 76 or HERS 80. In the Energy and Atmosphere (EA) category of LEED Canada for home, two paths are possible. If one chooses the EA1 credit, one must not comply with and cannot get credits EA2 to EA10.	The **Polycrete® Big Block 1200 Insulated Concrete Forms (ICF)** eliminate air leakage and thermal bridges. Their R-22 isolation factor for a 6" thick concrete wall with interior and exterior finishing allow for an important energetic performance.

Table: contribution of the Polycrete® Big Block 1200 system to LEED® Canada for home version 1.0

Target credits	Durable strategies	Potential points	Credit implementation	Credit requirements	Contribution and compliance of the Polycrete® Big Block 1200 system
EA 2.1	Basic Insulation	Required	Direct	Install insulation that meets or exceeds the R-value requirements listed in Chapter 6 of the 2004 International Energy Conservation Code (Table 602.1) or the local building codes, whichever is more stringent. Alternative wall and insulation systems, such as structural insulated panels (SIPs) and insulated concrete forms (ICFs), must demonstrate a comparable R-value, but thermal mass or infiltration effects cannot be included in the R-value calculation. Install insulation to meet the provincial or local standards. Installation must be verified by a Green Rater conducting a pre-drywall thermal bypass inspection, as summarized in Figure 3. A project that gets the EA1 credit cannot get this credit and vice and versa. A project aiming at this credit must follow the path through credits EA2 to EA10 and comply with all their prerequisites.	The **Polycrete® Big Block 1200 Insulated Concrete Forms (ICF)** eliminate air leakage and thermal bridges. Their R-22 isolation factor for a 6" thick concrete wall with interior and exterior finishing allow for an important energetic performance.
EA 2.2	Enhanced Insulation	2	Direct	Install insulation that exceeds the R-value requirements listed in Chapter 6 of the 2004 International Energy Conservation Code (Table 602.1) or the local building code, whichever is more stringent, by at least 10%. Alternative wall and insulation systems, such as structural insulated panels (SIPs) and insulated concrete forms (ICFs), must demonstrate a comparable R-value, but thermal mass or infiltration effects cannot be included in the R-value calculation. Install insulation that exceeds the R-value requirements listed in Chapter 6 of the 2004 International Energy Conservation Code (Table 602.1) or the local building code, whichever is more stringent, by at least 20%. Installation must be verified by a Green Rater. A project that gets the EA1 credit cannot get this credit and vice and versa. A project aiming at this credit must follow the path through credits EA2 to EA10 and comply with all their prerequisites.	The **Polycrete® Big Block 1200 Insulated Concrete Forms (ICF)** eliminate air leakage and thermal bridges. Their R-22 isolation factor for a 6" thick concrete wall with interior and exterior finishing allow for an important energetic performance.

Table: contribution of the Polycrete® Big Block 1200 system to LEED® Canada for home version 1.0

Target credits	Durable strategies	Potential points	Credit implementation	Credit requirements	Contribution and compliance of the Polycrete® Big Block 1200 system
EA 3.1	Reduced Envelope Leakage	Required	Direct	Meet the air leakage requirements shown in Table 17. The air leakage rate must be tested and verified by a Green Rater. A project that gets the EA1 credit cannot get this credit and vice and versa. A project aiming at this credit must follow the path through credits EA2 to EA10 and comply with all their prerequisites.	The **Polycrete® Big Block 1200 Insulated Concrete Forms (ICF)** eliminate air leakage and thermal bridges. The EPS panels are inserted one in another and this overlapping seals the wall therefore preventing air leakage.
EA 3.2 or EA 3.3	Greatly Reduced Envelope Leakage **or** Minimal Envelope Leakage	2 or 3	Direct	Meet the air leakage requirements shown in Table 17. The air leakage rate must be tested and verified by a Green Rater. A project that gets the EA1 credit cannot get this credit and vice and versa. A project aiming at this credit must follow the path through credits EA2 to EA10 and comply with all their prerequisites.	The **Polycrete® Big Block 1200 Insulated Concrete Forms (ICF)** eliminate air leakage and thermal bridges. The EPS panels are inserted one in another and this overlapping seals the wall therefore preventing air leakage.
MR 3.2	Construction Waste Reduction	3	Direct	Reduced construction waste. Generate 1.1 kg (2.5 pounds), or 0.012 cubic meter (0.016 cubic yards) or less of net waste (not including waste diverted for reclamation or recycling) per 0.09 square meter (1 sq ft) of conditioned floor area. Use column 1 or 2 and column 5 of Table 27 to determine the score.	The **Polycrete® Big Block 1200** can contribute to fulfill the requirements of this credit. The forms stay within the structure, therefore minimizing the waste. This will help attaining the goals of the waste management plan.

Table: contribution of the Polycrete® Big Block 1200 system to LEED® Canada for home version 1.0

Target credits	Durable strategies	Potential points	Credit implementation	Credit requirements	Contribution and compliance of the Polycrete® Big Block 1200 system
ID 3.1	Innovative or Regional Design	1	Direct	Develop a close environment impact reduction plan which will allow to attain these objectives: - sound pollution limitation - visual pollution limitation - exceptional traffic jam reduction - project duration reduction	The **Polycrete® Big Block 1200 system** contributes to this credit through its rapid installation, allowing to decrease the cranes, trucks, generators and workers presence. By reducing by up to 50% the shell construction time, the **Polycrete® Big Block 1200 system** contributes to the visual and sound pollution. The **Insulated Concrete Forms (ICF)** also allow to reduce the indirect pollution caused by exceptional traffic jams.
ID 3.2	Innovative or Regional Design	1	Direct	Reduce noise transmission from outside with an STC index of at least 35. (Requirement taken from the USGBC LEED® for Schools 2009, IEQ Credit 9 Enhanced Acoustical Performance.)	The **Polycrete® Big Block 1200 system** contributes to this credit by reducing transmission of exterior noises. By being air tight and insulated, the **Polycrete® Big Block 1200** system allow for a parasite free sound ambiance. The sound insulation is STC 60 for a 6" wall with interior and exterior finish.
TOTAL	**40**	**The Polycrete® Big Block 1200 system can contribute to forty (40) points for a LEED® Canada for home project.**			

All CENDREX documents required for LEED® certification documentation are available. They have been developed by LEED® certification specialists Vertima, in Canada, providing you with comprehensive and reliable information