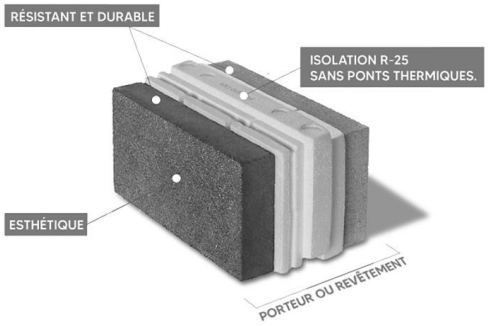
ISOBLOC
INSULATED MASONRY

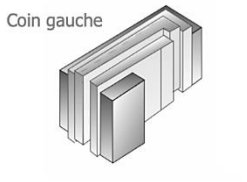
Product Sheet

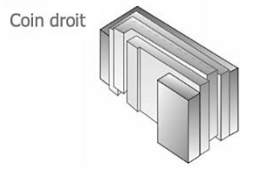
Description

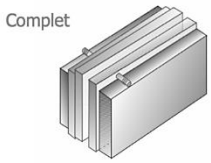
Isobloc is an insulated masonry unit composed of two solid concrete walls and an expanded polystyrene core. The concrete block walls are the structural components of the masonry unit. The expanded polystyrene core is molded to hold the block walls and allow the units to fit together to create a continuous insulating wall without thermal breakage.

The "Isobloc" construction system consists of three concrete masonry elements: a standard block, right-angled blocks, and left-angled blocks. Corners are available as internal and external corners.









Made in Canada since 1985

Isobloc has been proudly produced in Canada since 1985.

Effective thermal resistance

An Isobloc wall has an R-25 value without any thermal bridges.

Use

→ Non-load-bearing envelope wall
→ Fire-resistant party wall
→ Load-bearing wall

*Refer to the design guides for more information on the use of Isobloc in all its applications.

Finishes and colors

The exterior and interior finishes of Isobloc units can be customized and are pre-assembled according to the requested specifications.

*Refer to the color and finish guide for all available standard colors.

Fire resistance

A non-load-bearing Isobloc wall has a fire resistance of 2 hours.

ULC LISTED HOMOLOGUÉ

Isobloc is incombustible

The combustible insulation is fully encapsulated by a thermal barrier: integrated, made of concrete, in accordance with articles 3.1.5.14 and 3.1.5.6 of the NBC

Rain screen

Any water that might seep through any micro-cracks in the joints will be blocked by the waterproof core and will drain through the channels to the outside of the wall. Air circulation between the waterproof core and the exterior concrete keeps the wall dry.

PROPERTIES OF THE EXPANDED POLYSTYRENE CORE

Properties	Methods	Results	Units
Thermal resistance @ 23.9°C (75°F) RSI per 25mm (R/in)	ASTM C518	0.74 (4.2)	RSI m2 • °C/W/25 mm (R) (°F • ft2 • h/Btu/in)
Maximum water vapor permeability	ASTM E96	130 (2.3)	ng/Pa.s.m2 (perm)
Stability max. dimensional	ASTM D2126	1.5	%
Max water absorption .	ASTM D2842	2	%
Max. linear expansion coefficient	ASTM D696	6 X 10-5 (3.5 X 10-5)	mm/mm/°C (in/in/°F)
Temperature max. usage	CONSTANT	75 (167)	°C (°F)
	INTERMITTENT	82 (180)	°C (°F)
Density	-	25 (1.85)	kg/m³ (pcf)

*The results shown above are for polystyrene tested alone. The results do not take into account the complete assembly.
**This product meets the requirements of CAN ULC S701.1, Type 3.

PROPERTIES OF CONCRETE WALLS

Properties	CSA 165.1	Results	Units
Compressive strength	> 15	18.5 - 22.9	MPa
Absorption	< 175	106.4	kg/m3
Density	> 2000	2198	kg/m3

*The results shown above are for a concrete wall tested alone. The results do not take into account the complete assembly.
**This product meets the requirements of ASTM C90 and CSA 165.1 standards

PHYSICAL PROPERTY OF THE ISOBLOC ASSEMBLY

Properties	Methods	Results	Units
Effective thermal resistance of the assembly	Method of calculating isothermal planes and parallel path	4.41	RSI m2 • °C/W/25 mm
		25.05	(R) (°F • ft2 • h/Btu/in)
Fire resistance	ULC Tested Assembly - Design No. U907	2	Hours
Sound transmission index:	ASTM E413	45	ITS (STC)

*This product meets the requirements of CAN ULC S701.1, Type 3.

ADDITIONAL INFORMATION

Dimensional tolerances
According to CSA A165.1 standard
±2 mm in all directions

Dimensions

Description	Width x mm (in)	Height x mm (in)	Depth mm (in)
Complete block	390 (15 3/8'')	190 (7 1/2'')	240 (9 1/2'')

All mortar joints should be approximately 10mm (3/8'') to achieve a module of 400 x 200 (16'' x 8'').

Green construction and eco-responsibility:
Contributes to projects seeking LEED certification. Meets 4 design criteria.
Environmental Product Declaration for expanded polystyrene core available upon request.

WWW.ISOBLOC.COM