TECHNICAL DATA SHEET 240-1.3

07.21.13.13

Manufacturer

ISOLOFOAM XHD 400 and **XHD 600** are manufactured by Isolofoam Group, a Canadian company and premier manufacturer of expanded polystyrene insulation products for over 40 years

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Description & applications

ISOLOFOAM XHD 400 and **XHD 600** are very high density and very high compressive strength expanded polystyrene rigid insulation panels designed for applications requiring high compressive resistance of 40 or 60 psi (275 and 414 kPa). Mainly for commercial, industrial and civil engineering constructions.

Concrete slabs	– Provides high-performance insulation under the concrete slab when very high compressive strength is required.
Exterior foundations	– Ensures insulation of the foundation walls from the outside where heavy traffic is expected near the building.
Terraces & parking areas	– Provides stability in freeze-thaw situations.
Road & lightweight fill **– Pavement insulation (frost protection)** **– Road insulation** **– Insulation of water and sewer systems**	– Used as frost protection layer for road and rail construction. – Lightweight fill, helps load distribution under roads and bridge approaches in areas with unstable soils. – Ideal for distributing loads on swampy ground over marshy soils due to its high resistance to sagging and shearing. – Lightweight expanded polystyrene (EPS) base helps to avoid road settlement. – The products are designed to meet civil engineering and Quebec Ministry of Transport (MTQ) standards and requirements.

Dimensions

Thanks to the manufacturing process, Isolofoam Group expanded polystyrene insulation is available in a wide variety of formats and thicknesses.

ISOLOFOAM XHD 400 - XHD 600

Dimensions	Thicknesses	R Value (RSI)	
XHD 400 24" x 96" Butt edge XHD 600 48" x 96" Butt edge	1"	4.35	(0.77)
	1.2"	5.2	(0.92)
	1.5"	6.5	(1.15)
	1.8"	7.8	(1.38)
	2"	8.7	(1.54)
	2.4"	10.4	(1.84)
	3"	13	(2.29)
	3.5"	15.2	(2.67)

XHD 400 - Also available: other thicknesses; 48'' x 96'', shiplapped 2 or 4 sides.
XHD 600 - Also available: other thicknesses; 24'' x 96''.

Efficiency at the construction site. Quote with project-specific dimensions available on request.

Environment

Containing between 95% and 98% air and only 2% to 5% plastic, **ISOLOFOAM XHD 400** and **XHD 600** presents toxicity risks lower than those from conventional building materials and it does not and has never contained HFCs that damage the ozone layer.

Illustrations for information purposes only. The actual product may differ from the illustrations.

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Physical properties of XHD Series

Insulation panel	METHODS	UNITS	XHD 200	XHD 300	XHD 400	XHD 600
THERMAL RESISTANCE MIN.	ASTM C-518	m^2•°C/W/25 mm (hour•ft^2•°F/Btu/in)	0.74 (4.20)	0.75 (4.30)	**0.77 (4.35)**	**0.77 (4.35)**
COMPRESSIVE STRENGTH MIN. *@ 10% deformation*	ASTM D-1621	kPa (psi)	140 (20)	210 (30)	**275 (40)**	**414 (60)**
COMPRESSIVE MODULUS	ASTM D-1621	kPa (psi)	-	-	**9 000 (1 305)**	**15 000 (2 175)**
FLEXURAL STRENGTH MIN.	ASTM C-203	kPa (psi)	270 (39)	350 (50)	**414 (60)**	**517 (75)**
WATER VAPOUR PERMEABILITY MAX.	ASTM E-96	ng/Pa•s•m^2 (perms)	130 (2.3)	130 (2.3)	**130 (2.3)**	**130 (2.3)**
WATER ABSORPTION MAX.	ASTM D-2842	%	2	1.8	**1.5**	**1.5**
DIMENSIONAL STABILITY MAX.	ASTM D-2126	%	1.5	1.5	**1.5**	**1.5**
COEFFICIENT OF THERMAL EXPANSION MAX.	ASTM D-696	mm/mm/°C (in/in/°F)	6 X 10^{-5} (3.5 X 10^{-5})	6 X 10^{-5} (3.5 X 10^{-5})	**6 X 10^{-5} (3.5 X 10^{-5})**	**6 X 10^{-5} (3.5 X 10^{-5})**
EFFECTIVE TEMPERATURE RANGE MAX.	CONTINUOUS	°C (°F)	75 (167)	75 (167)	**75 (167)**	**75 (167)**
	INTERMITTENT	°C (°F)	82 (180)	82 (180)	**82 (180)**	**82 (180)**
FLAMME SPREAD	CAN/ULC S102.2M	-	240	240	**240**	**240**

The product contains a flame retardant.

Isolofoam Groupe Material Safety Data Sheet available on website.

Warranty & Certifications

Meets the following standards and requirements:

- CAN/ULC S701, Type 3
- Evaluated by CCMC #13638-L: Compliant to ULC-S701.1:17, EPS Type 3 (XHD 400, XHD 600)
- MTQ, Standard 14301, Polystyrene type A for road construction
- GREENGUARD - UL 2818, GREENGUARD Gold - UL 2818

Advantages & Benefits

- High compressive strength: 40 or 60 psi.
- Stable and permanent R value.
- Retains no gas other than air in its manufacture.
- Long-term stability, even when exposed to intense freeze-thaw periods.
- Low water absorption and high drying capacity.
- Durable and insensitive to the action of moisture and soil organisms. Dries up as the soil drains.
- Neutral biological behavior. No risk to the water table, microorganisms and small animals.
- Documented and predictable geotechnical performance.
- Lightweight panels, easy to handle and install.
- Optimal dimensions reduce handling and installation time.

Technical Services

Our experts will be pleased to answer your questions regarding application and installation of our products.

Compliance certifications for MTQ provided on request.

Availability & Cost

Availability: Throughout eastern Canada.
Cost: Current price list available on request.

Project cost estimates based on information in this technical data sheet are rapidly available with a physical description made from construction drawings and summary specifications.

Limitations & Storage

Combustible material. Indoors, a protective coating or thermal barrier is required as specified in the appropriate building code. Avoid contact between insulation and petroleum-based solvents or their vapours.

Expanded polystyrene insulation is not sensitive to water. Can be stored outdoors. Rain, snow and moisture are not concerns before or during construction.

Avoid prolonged exposure to ultraviolet light which may cause discolouration of the product.

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