

OSB.COMFORT™

EXPANDED POLYSTYRENE RIGID INSULATION COMBINED TO AN ORIENTED STRUCTURAL BOARD

The OSB.Comfort™ boards manufactured by Styro Rail Inc. are composed of type 2 expanded polystyrene [EPS] rigid insulation laminated to an oriented structural board of 7/16" [OSB]. They comprise of perforations for complying with permeability requirements.

Available option:

OSB.ComfortG™ boards manufactured with graphite polystyrene.



CHARACTERISTICS

R4 – MEETS THE CONSTRUCTION CODE REQUIREMENTS FOR COVERING THERMAL BRIDGES

R5 AND MORE – FOR COVERING THE THERMAL BRIDGES OF THE COLDEST AREAS

LARGE NAILING SURFACE FOR EXTERIOR CLADDING

QUICK WALL ERECTION

NON VAPOR BARRIER

BREATHABLE - FACTORY MADE PERFORATIONS TO COMPLY WITH PERMEABILITY STANDARDS

MEETS CAN/ULC-S701.1 STANDARD

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AVAILABLE DIMENSIONS

				OSB.Comfort™ REGULAR	OSB.ComfortG™ GRAPHITE
1219 mm x 2438 mm	[48" x 96"]	30 mm	[1- ³ / ₁₆ "	-	R4.0
1219 mm x 2743 mm	[48" x 108"]	33 mm	[1- ⁵ / ₁₆ "	R4.0	-
		37 mm	[1- ⁷ / ₁₆ "	-	R5.0
		40 mm	[1- ⁹ / ₁₆ "	R5.0	-
		43 mm	[1- ¹¹ / ₁₆ "	R5.6	R6.0
		46 mm	[1- ¹³ / ₁₆ "	R6.0	-
		48 mm	[1- ⁷ / ₈ "	-	R7.0
		52 mm	[2- ¹ / ₁₆ "	R7.0	R8.0
		59 mm	[2- ⁵ / ₁₆ "	R8.0	-
		65 mm	[2- ⁹ / ₁₆ "	-	R10.0
		71 mm	[2- ¹³ / ₁₆ "	R10.0	-

Other dimensions available upon request. Square joints.

RECOMMENDED USE

Install **OSB.Comfort™** boards on the exterior surface of framed walls in order to obtain a continuous thermal envelope, reinforcement against diagonal deformations and to offer support for the fastening of masonry ties or wooden furs for lightweight siding.

Install **OSB.ComfortG™** boards when a higher insulation is needed for a specified thickness.

CERTIFICATION

Warnock Hersey has certified the type 2 expanded polystyrene contained in **OSB.Comfort™** and **OSB.ComfortG™** boards in accordance with the CAN/ULC-S701.1 standard. The type 2 expanded polystyrene produced by STYRORAIL™ is listed in the CCMC Registry of Product Evaluation under CCMC 13271-L.

Oriented structural board contained in **OSB.Comfort™** and **OSB.ComfortG™** boards complies with CAN/CSA-0325 standard. Boards are mark with W24, Exposure 1 and Exterior Type.

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PHYSICAL PROPERTIES

INSULATING PANEL	
Type	2
Thickness	22 mm-60 mm [7/8"-2-3/8"]
Thermal Resistance Min. Regular [ASTM C518] Thickness of 25 mm [1"]	RSI 0,70 [R4.0]
Thermal Resistance Min. Graphite [ASTM C518] Thickness of 25 mm [1"]	RSI 0,84 [R4.75]
MVTR Max. [ASTM E96]	200 ng/Pa-s-m ² [3.5 US Perms]
Compressive Strength Min. [ASTM D1621] 10% Deformation	110 kPa [16 PSI]
Flexural Strength Min. [ASTM C203]	240 kPa [35 PSI]
Water Absorption Max. [ASTM D2842] Volume	3 %
Dimensional Stability Max. [ASTM D2126] Linear Variation	1.5 %
Limiting Oxygen Index Min. [ASTM D2863]	24 %
Density Min. [ASTM C303]	20 kg/m ³ [1.2 lbs/ft ³]
Flame Spread Rating Regular [CAN/ULC S102.2]	145
Flame Spread Rating Graphite [CAN/ULC S102.2]	240

OSB.COMFORT™	
MVTR Max. [ASTM E96]	60 ng/Pa-s-m ² [1.0 US Perm]

* Data provided by APA - The Engineered Wood Association

** Test Value - Not for Design Use

*** Meeting National Building Code, article 9.3.2.1

Design Capacities for Engineers and Architects can be found in the latest edition of Engineering Design in Wood CSA-086-14, Table 9.3C.

ORIENTED STRUCTURAL BOARD*	
Thickness	11 mm [7/16"]
Tolerances [CAN/CSA-0325, PS2] Length and Width Thickness	± 1.6 mm [1/16"] ± 0.8 mm [1/32"]
Squareness Max. [CAN/CSA-0325, PS2]	1.3 mm/m.l. [1/64"/sq.ft.]
Straightness Max. - Of Panel Edge [CAN/CSA-0325, PS2]	1.6 mm [1/16"]
Linear Expansion [ASTM D1037] Parallel and Perpendicular	≤ 0.5 %
Concentrated Loads [ASTM E661] Deflection under 0.89 kN [200 lbs]** Ultimate Load**	12.7 mm [1/2"] 1.78 kN [400 lbs]
Uniform Loads - Deflection [CAN/CSA-0325, PS2] Roof 600mm [24"] c/c** Floor 400mm [16"] c/c**	2.5 mm @ 1.68 kPa [0.098" @ 0.24 PSI] 1.1 mm @ 4.79 kPa [0.043" @ 0.69 PSI]
Uniform Loads - Ultimate Load [CAN/CSA-0325, PS2] Roof 600mm [24"] c/c** Floor 400mm [16"] c/c**	7.2 kPa [1.04 PSI] 15.8 kPa [2.29 PSI]
Wall Racking [ASTM E72] Deflection** Ultimate Load**	5.1 mm [0.2"] 6.6 kN/m [452 lbs/ft]
Fastener Holding Lateral load [PS2] Ultimate Load**	778 N [175 lbs]
Fastener Holding Withdrawal Load [ASTM D-1961] Ultimate Load**	89 N [20 lbs]
Dimensional Stability [CAN/CSA-0325, PS2]	0.5 %
Bond Classification [CAN/CSA-0325, PS2]	Exposure 1***

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ENVIRONMENTAL DATA

The expanded polystyrene used in the making of the **OSB.Comfort™** and **OSB.ComfortG™** boards are composed of 98% air and 2% plastic material. They are manufactured without HCFC, HFC gases and without HBCD flame retardant.

The STYRORAIL™ products can contribute to LEED credits.

Please send us your LEED Material Declaration Form at projtleed@styorail.ca.

STORAGE

Store **OSB.Comfort™** and **OSB.ComfortG™** boards in a dry and ventilated location, protected from the outside elements, ultraviolet rays, open flames or other sources of ignition. Stack boards on pallets of minimum 100 mm [4"] over the ground.

Pay special attention to the storage of the **OSB.ComfortG™** boards made with graphite polystyrene.

Cover the unwrapped **OSB.ComfortG™** boards or if packaging has been damaged with an **opaque** white tarp. An excessive heat accumulation can deform products made with graphite polystyrene.

Do not store the **OSB.ComfortG™** boards close to any reflective surfaces [ex: glass, metal]. A heat concentration from reflected sunlight can deform products made with graphite polystyrene.

INSTALLATION

Boards must be dry and in good condition before installation.

To limit the color loss from UV exposure, cover the installed **OSB.Comfort™** boards with an exterior cladding protecting them from ultraviolet rays.

Avoid the prolonged exposure to sunlight of the **OSB.ComfortG™** grey/black surface made with graphite polystyrene. Avoid the concentration of sunlight rays from radiation. Cover as soon as possible on hot days and/or during non-windy conditions. An excessive heat accumulation can deform products made with graphite polystyrene.

Refer to the *Installation Guide* for more information.

LIMITATIONS

Expanded polystyrene is combustible. Even if expanded polystyrene contains a flame retardant, limit use of open flame or ignition sources near product.

A protective barrier or thermal barrier is required as specified in the appropriate building code.

Expanded polystyrene may be affected by some oil based solvents.

An excessive heat accumulation can deform products made with graphite polystyrene.

EXEMPTION OF LIABILITY

The information herein is based on the present state of our best scientific and practical knowledge. The user is responsible for checking the suitability of products for their intended use. STYRORAIL™ technical data sheets are updated on a regular basis; it is the user's responsibility to obtain and to confirm the most recent version. Information contained in this data sheet may change without notice.