

SR.2X4™

EXPANDED POLYSTYRENE RIGID INSULATION FOR FOUNDATION

The SR.2X4™ panels manufactured by Styro Rail Inc. offer an alternative to traditional insulation of basements walls. They are produced in type 1 expanded polystyrene [EPS] rigid insulation. Each panel is comprised with channels at 406 mm [16"] o.c. or 610 mm [24"] o.c. in order to facilitate the insertion of wood stud framing. Metal brackets are provided to firmly secure the wood stud framing to the concrete wall.

Available option: SR.2X4G™ panels manufactured with NEOPOR® graphite polystyrene beads.



CHARACTERISTICS

EXCELLENT MOISTURE RESISTANCE

RAPID INSTALLATION OF THE 2"X4" STUD

EASY ELECTRICAL WIRING AND BOXE INSTALLATION - NO CUTTING OF THE INSULATION IS NECESSARY

SOLID FIXATION TO CONCRETE WALL WITH METAL BRACKETS

MEETS CAN/ULC-S701-11 STANDARD

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AVAILABLE DIMENSIONS

| | | | | SR.2X4™ REGULAR | SR.2X4G™ NEOPOR® |
|-------------------|--------------|--------|----------|--------------------|---------------------|
| 1219 mm x 2438 mm | [48" x 96"] | 76 mm | [3"] | R14 [†] | - |
| 1219 mm x 2591 mm | [48" x 102"] | 102 mm | [4"] | R17 [†] | R21 [†] |
| 1219 mm x 2743 mm | [48" x 108"] | 114 mm | [4-1/2"] | - | R23 [†] |
| 1219 mm x 2997 mm | [48" x 118"] | | | | |

Other dimensions available upon request. Ship lapped joints on two sides. Default channels at 406 mm [16"] o.c. Channels at 610 mm [24"] o.c. available upon request.

[†] Effective R-value based on typical wall assembly: concrete wall 200 mm [8"] with normal density aggregates, SR.2x4™, air cavity 38 mm [1-1/2"], wood frame 38 mm x 89 mm [2"x4"] at 600 mm [24"] o.c., vapor barrier and gypsum 12.7 mm [1/2"].

RECOMMENDED USE

Install SR.2X4™ panels on the interior surface of foundation walls in order to obtain a continuous thermal envelope. Suitable for renovation projects and new construction.

CERTIFICATION

Warnock Hersey has certified the type 1 expanded polystyrene contained in SR.2X4™ and SR.2X4G™ panels in accordance with the CAN/ULC-S701-11 standard. The type 1 expanded polystyrene produced by STYRORAIL™ is listed in the CCMC Registry of Product Evaluation under CCMC 13276-L.

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PHYSICAL PROPERTIES

| INSULATING PANEL | SR.2X4™ REGULAR | SR.2X4G™ NEOPOR® |
|---|--|--|
| Type | 1 | 1 |
| Thermal Resistance Min. [ASTM C518] Thickness of 25 mm [1"] | RSI 0,65 [R3.7] | RSI 0,83 [R4.7] |
| MVTR Max. [ASTM E96] | 300 ng/Pa-s-m² [5.24 US Perms] | 300 ng/Pa-s-m² [5.24 US Perms] |
| Compressive Strength Min. [ASTM D1621] 10% Deformation | 70 kPa [10 PSI] | 70 kPa [10 PSI] |
| Flexural Strength Min. [ASTM C203] | 170 kPa [25 PSI] | 170 kPa [25 PSI] |
| Water Absorption Max. [ASTM D2842] Volume | 6 % | 6 % |
| Dimensional Stability Max. [ASTM D2126] Linear Variation | 1.5 % | 1.5 % |
| Limiting Oxygen Index Min. [ASTM D2863] | 24 % | 24 % |
| Density Min. [ASTM C303] | 16 kg/m³ [1.0 lbs/ft ³] | 16 kg/m³ [1.0 lbs/ft ³] |
| Flame Spread Rating [CAN/ULC S102.2] | 145 | 240 |

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ENVIRONMENTAL DATA

The expanded polystyrene used in the making of the SR.2X4™ and SR.2X4G™ panels 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 projetleed@styrorail.ca.

STORAGE

Store SR.2X4™ and SR.2X4G™ panels in a dry location, protected from the outside elements, ultraviolet rays, open flames or other sources of ignition. Stack panels on pallets of minimum 100 mm [4"] over the ground.

Pay special attention to the storage of the SR.2X4G™ panels made with Neopor®.

Cover the unwrapped SR.2X4G™ panels or if packaging has been damaged with an **opaque** white tarp. An excessive heat accumulation can deform products made with Neopor®.

Do not store the SR.2X4G™ panels near any reflective surfaces [ex: glass, metal]. A heat concentration from reflected sunlight can deform products made with Neopor®.

NEOPOR® Registered Trademark of BASF.

INSTALLATION

Panels must be dry and in good condition before installation.

To limit the color loss from UV exposure, cover the installed SR.2X4™ panels with an exterior cladding protecting them from ultraviolet rays.

Avoid the prolonged exposure to sunlight of the SR.2X4G™ grey/black surface made with Neopor®. 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 Neopor®.

Refer to the *Installation Guide* for more informations.

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 Neopor®.

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.