

# SR.P400™

## VERY HIGH COMPRESSIVE STRENGTH EXPANDED POLYSTYRENE RIGID INSULATION

The SR.P400™ panels manufactured by Styro Rail Inc. are composed of type 3 expanded polystyrene [EPS] rigid insulation and offers a compressive strength of 276 kPa [40 PSI].

Available option: SR.P400G™ panels manufactured with NEOPOR® graphite polystyrene beads.



### CHARACTERISTICS

VERY HIGH COMPRESSIVE STRENGTH

SR.P400™: INSULATING VALUE OF RSI 0.76/25 MM [R-VALUE 4.3/INCH]

SR.P400G™: SUPERIOR INSULATING VALUE WITH NEOPOR®: RSI 0.85/25 MM [R-VALUE 4.8/INCH]

MEETS CURRENT BUILDING CODE REQUIREMENTS

CLOSED CELL- MOISTURE RESISTANT

NON VAPOUR BARRIER

PERMANENT R-VALUE – DOES NOT DIMINISH WITH TIME

MEETS CAN/ULC-S701-11 STANDARD



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**AVAILABLE DIMENSIONS**

				<b>SR.P400™ REGULAR</b>	<b>SR.P400G™ NEOPOR®</b>
<b>610 mm x 2438 mm</b>	[24" x 96"]	<b>25 mm</b>	[1"]	R4.3*	R4.8
<b>1219 mm x 2438 mm</b>	[48" x 96"]	<b>30 mm</b>	[1-3/16"]	R5.1	R5.7
		<b>51 mm</b>	[2"]	R8.6*	R9.6
		<b>59 mm</b>	[2-5/16"]	R10.0*	R11.1
		<b>76 mm</b>	[3"]	R12.9*	R14.4
		<b>102 mm</b>	[4"]	R17.2	R19.2
		<b>127 mm</b>	[5"]	R21.5	R24.0

Other dimensions available upon request. Square joints by default. Panels of 25 mm [1"]; ship lap joints available on two sides. Panels of 38 mm [1-1/2"] or more: ship lap joints available on two or four sides; G-Lock™ system available on two or four sides for 1219 mm [48"] wide panels.

\* In stock

**RECOMMENDED USE**

Install **SR.P400™** insulation panels when applications require a very high compressive strength insulating material. Ideal to insulate concrete footings of all types of construction. Insulate underneath commercial, industrial and agricultural garage concrete slabs, road infrastructures, parking spaces, drainage pipes under the parking spaces of various building types. Used to insulate under arena slabs, refrigerated warehouses and concrete sidewalks.

Install **SR.P400G™** panels when a higher insulation value is needed for a specified thickness.

**CERTIFICATION**

Warnock Hersey has certified the type 3 expanded polystyrene contained in **SR.P400™** and **SR.P400G™** panels in accordance with the CAN/ULC-S701-11 standard. The type 3 expanded polystyrene produced by STYRORAIL™ is listed in the CCMC Registry of Product Evaluation under CCMC 13277-L.

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**PHYSICAL PROPERTIES**

INSULATING PANEL	SR.P100™	SR.P200™	SR.P300™	SR.P350™	SR.P400™	SR.P600™
Type	1	2	3	3	3	3
Thermal Resistance Min. Regular [ASTM C518] Thickness of 25 mm [1"]	RSI 0,65 [R3.7]	RSI 0,70 [R4.0]	RSI 0,74 [R4.2]	RSI 0,76 [R4.3]	RSI 0,76 [R4.3]	RSI 0,81 [R4.6]
Thermal Resistance Min. Neopor® [ASTM C518] Thickness of 25 mm [1"]	RSI 0,83 [R4.7]	RSI 0,84 [R4.75]	RSI 0,85 [R4.8]	RSI 0,85 [R4.8]	RSI 0,85 [R4.8]	N/A
MVTR Max. [ASTM E96]	300 ng/Pa-s-m² [5.24 US Perms]	200 ng/Pa-s-m² [3.5 US Perms]	130 ng/Pa-s-m² [2.27 US Perms]	130 ng/Pa-s-m² [2.27 US Perms]	130 ng/Pa-s-m² [2.27 US Perms]	130 ng/Pa-s-m² [2.27 US Perms]
Compressive Strength Min. [ASTM D1621] 10% Deformation	70 kPa [10 PSI]	110 kPa [16 PSI]	140 kPa [20 PSI]	207 kPa [30 PSI]	276 kPa [40 PSI]	414 kPa [60 PSI]
Flexural Strength Min. [ASTM C203]	170 kPa [25 PSI]	240 kPa [35 PSI]	300 kPa [44 PSI]	345 kPa [50 PSI]	414 kPa [60 PSI]	517 kPa [75 PSI]
Water Absorption Max. [ASTM D2842] Volume	6 %	4 %	2 %	2 %	2 %	0.7 %
Dimensional Stability Max. [ASTM D2126] Linear Variation	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %
Limiting Oxygen Index Min. [ASTM D2863]	24 %	24 %	24 %	24 %	24 %	24 %
Density Min. [ASTM C303]	16 kg/m³ [1.0 lbs/ft³]	20 kg/m³ [1.2 lbs/ft³]	25 kg/m³ [1.5 lbs/ft³]	29 kg/m³ [1.8 lbs/ft³]	39 kg/m³ [2.4 lbs/ft³]	53 kg/m³ [3.3 lbs/ft³]
Flame Spread Rating Regular [CAN/ULC S102.2]	145	145	145	145	145	145
Flame Spread Rating Neopor® [CAN/ULC S102.2]	240	240	240	240	240	N/A

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### ENVIRONMENTAL DATA

The expanded polystyrene used in the making of the SR.P400™ and SR.P400G™ 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](mailto:projetleed@styrorail.ca).

### STORAGE

Store SR.P400™ and SR.P400G™ 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.P400G™ panels made with Neopor®.

Cover the unwrapped SR.P400G™ 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.P400G™ panels near any reflective surfaces [ex: glass, metal]. A heat concentration from reflected sunlight can deform products made with Neopor®.

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### INSTALLATION

Panels must be dry and in good condition before installation.

To limit the color loss from UV exposure, cover the installed SR.P400™ panels with an exterior cladding protecting them from ultraviolet rays.

Avoid the prolonged exposure to sunlight of the SR.P400G™ 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.