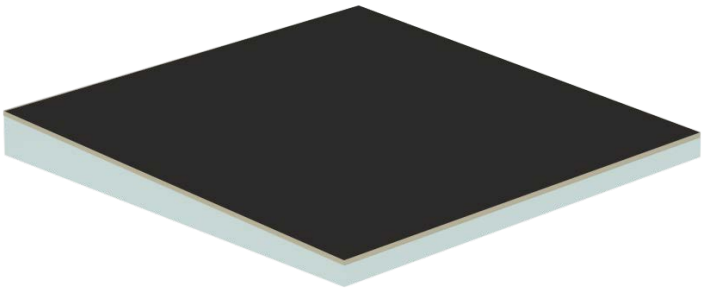
MILLENIUM
BUILDING ENVELOPE SYSTEMS AND COMPONENTS

Tapered rigid insulation board for roof

NOVOTHERM™ BZO + WF | T1 - T2



The tapered rigid insulation panels are tailor-made by Millenium according to dimensions and slope specifications. They are composed of type 1 or 2 expanded polystyrene [EPS] rigid insulation, laminated in the factory to a 13 mm wood fiber board to meet the various requirements of projects.

RECOMMENDED USE

Install tapered rigid insulation panels to ensure a positive slope to drain, scupper and gutter.

Ideal for roofing applications that use typical roofing materials, such as Built-Up Roofing, EPDM, TPO, PVC and modified bitumen.

APPLICATIONS

Slope system for roof with drain, single slope, perimeter slope, counter-slope, cricket, deck grading and other possibilities available on request.

PANEL SIZE

1 219 mm x 1 219 mm [48" x 48"]

MOST COMMON SLOPES

0.5 %	2 %
1 %	3 %
1.5 %	4 %

The percentage of slope is established according to your needs and the panels are custom-cut according to a predetermined pattern made by Millenium which ensures water flowing to desired locations.
Slope insulation panel boards have square joints on all 4 sides.
An installation layout is provided by Millenium to ensure optimal drainage and quality of installation on the job site.

CERTIFICATION

The expanded polystyrene contained in the rigid insulation boards has been evaluated by an external laboratory and complies with the CAN/ULC-S701-11 type:1 and type:2 standard.

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FEATURES AND BENEFITS

- Ensure a positive slope to drain while retaining the structural and economic advantages provided by a flat roof deck;
- Adapts to all types of decks;
- R-value which remains permanent with time;
- Various thickness and slopes to comply with specifications;
- 100 % recyclable material;
- Low water absorption - Absorbs between 50 % and 75 % less water depending on the EPS type used*;
- Meets CAN/ULC-S701-11 standard.

* According to the requirements of CAN/ULC-S701-11 standard

ENVIRONMENTAL DATA

Expanded polystyrene included in rigid insulation panels are composed of 98 % air and 2 % plastic material. They are manufactured without HCFC or HFC gases and without HBCD flame retardant.

The Millenium products can contribute to LEED credits for Optimizing Energy Performance, Recycled Content, Regional Materials, Low-Emitting Materials [Adhesives and Sealants], Construction Waste Management and IAQ Management Plan for the Pre-Occupancy Phase.

Please send us your LEED Material Declaration Form at **info@millenium.plus.**

STORAGE

Store 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"] above the ground.

INSTALLATION

Panels must be dry and in good condition before installation.

To limit the color loss from extended periods of UV exposure, cover the panels with a membrane protecting them from ultraviolet rays.

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.

The continuous service temperature limit of expanded polystyrene is 75°C [167°F]. Constant exposure to temperature above 75°C [167°F] will shrink and warp the product.

EXEMPTION FROM 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. Millenium 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.

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TECHNICAL DATA EPS

Physical properties

Novotherm™ BZO	Type 1	Type 2
Thermal Resistance Min.	RSI 0.65	RSI 0.70
[ASTM C518] Thickness of 25 mm [1"]	[R3.7]	[R4.0]
MVTR Max.	300 ng/Pa.s.m^2	200 ng/Pa.s.m^2
(ASTM E96)	[5.24 US Perms]	[3.5 US Perms]
Compressive Strength	±93 kPa	±122 kPa
[ASTM D1621] Thickness of 11/2" (38 mm)	[13 PSI]	[18 PSI]
Flexural Strength Min.	170 kPa	240 kPa
[ASTM C203]	[25 PSI]	[35 PSI]
Water Absorption Max.		
[ASTM D2842] Volume	6 %	4 %
Dimensional Stability Max.		
[ASTM D2126] Linear Variation	1.5 %	1.5 %
Limiting Oxygen Index Min.		
[ASTM D2863]	24 %	24 %
Density Min.	16 Kg/m^3	20 Kg/m^3
[ASTM C303]	[1.00 lbs/ft^3]	[1.25 lbs/ft^3]
Flame Spread Rating		
[CAN/ULC S102.2]	145	145

TECHNICAL DATA WOOD FIBER INSULATION

Density [ASTM D-1037]	**RSI232 kg/ m3**
	[14,5 lb/pi3]
Transverse Load at Rupture	**49 N**
[ASTM C209]	11 lbf]
Thermal Resistance	**RSI0,52**
[ASTM C518] Thickness 25 mm [1"]	[R 3,1]
Water Absorption	7 %
[ASTM C209]	
Tensile Strength	**350 kPa**
[ASTM C209] Parallel to surface	[51 PSI]
Tensile Strength	**24 kPa**
[ASTM C165] Perpendicular to surface	[3,5 PSI]
Compressive Strength	**310 kPa**
(10% Deformation) [ASTM C165]	[45 PSI]

Meets **CAN / ULC-706-09** and **ASTM C208**