

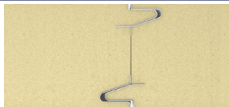


# PANEL WITH POLYISOCYANURATE (POLYURETHANE)



Norex® architectural panels are high-energy-efficient insulated panels designed for building envelopes.

## SPECIFICATIONS

|                                 | NOREX-H  |      | NOREX-L   |      | NOREX-S  |      |
|---------------------------------|--|------|---|------|--|------|
| <b>DESCRIPTION</b>              | <ul style="list-style-type: none"> <li>&gt; Horizontal &amp; vertical mounting</li> <li>&gt; Joint with concealed fasteners</li> <li>&gt; Deep fluting ¾ in. (19 mm) deep or ¾ in. (19 mm) wide</li> <li>&gt; Different architectural arrangements</li> <li>&gt; Applications: outdoor wall</li> </ul> |      | <ul style="list-style-type: none"> <li>&gt; Vertical mounting</li> <li>&gt; Joint with concealed fasteners</li> <li>&gt; Applications: outdoor wall, indoor ceilings</li> <li>&gt; Pressure Equalized Rainscreen Joint</li> </ul> |      | <ul style="list-style-type: none"> <li>&gt; Vertical mounting with straight joint</li> <li>&gt; Applications: interior partitions</li> </ul> |      |
| <b>WIDTH</b> <sup>(1)(2)</sup>  | 24, 30, 36 or 41 ½ in.   |      | 36 or 42 ½ in.  |      | 44 in.   |      |
| <b>THICKNESS</b>                | 3 and 4 in.  |      | 3, 4, 5, 6 and 8 in.  |      | 4 in.  |      |
| <b>R-VALUE</b>                  | R 7.41 / in. (ASTM C-518 13°C - 35°C)  |      |   |      |  |      |
| <b>LENGTH</b>                   | 7 to 52 ft. 3 in.  |      |   |      |  |      |
| <b>STEEL INNER FACE</b>         | <ul style="list-style-type: none"> <li>&gt; Standard thickness – 26 Ga</li> <li>&gt; Optional thickness – 24 Ga</li> </ul>   |      |   |      |  |      |
| <b>STEEL OUTER FACE</b>         | <ul style="list-style-type: none"> <li>&gt; Standard thickness – 22 Ga</li> </ul>  |      | <ul style="list-style-type: none"> <li>&gt; Standard thickness – 26, 22 Ga</li> <li>&gt; Optional thickness – 24 Ga</li> </ul>  |      |  |      |
| <b>JOINTS</b>                   |   |      |   |      |   |      |
| <b>WEIGHT</b> <sup>(3)(4)</sup> | Thickness (in.)  | 3    | 4   | 5    | 6  | 8    |
|                                 | Weight (lbs/ft <sup>2</sup> )  | 2.44 | 2.66  | 2.88 | 3.11   | 3.55 |

<sup>(1)</sup> The final module width may change due to variations in fabrication and installation. We do not recommend designing a panel arrangement in which the module width plays a critical role. <sup>(2)</sup> Product availability is subject to change without notice and minimum quantities may be required for some products configurations. For more information, please contact your local representative. <sup>(3)</sup> Panel weight for a Norex-L 42 ½ in. wide panel. <sup>(4)</sup> Calculations based on 26 gauge steel on both sides and an insulated density of 2.65.

# APPLICATIONS

Norex panels can be found in a variety of applications including industrial and commercial buildings, cold-storage and controlled-environment buildings, sports centers, interior partitions and suspended ceilings with limited load-bearing capacity.

## FEATURES / BENEFITS



- > Exclusive and superior fastening system
- > Wider girt spacing reduces costs
- > Fast, simple & economical installation

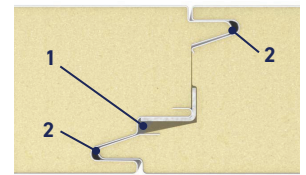
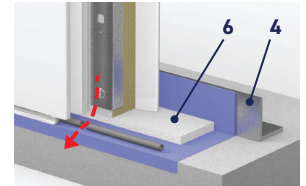
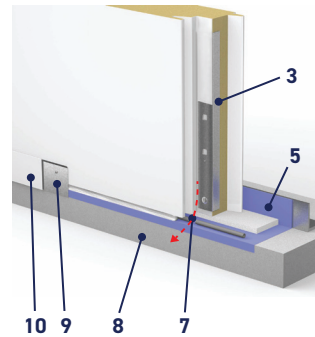


- > The materials are environmentally friendly and nontoxic
- > Can contribute to obtaining LEED certification for a project



- > No cavities, moisture penetration, thermal bridges, risk of interstitial condensation, or lack of insulation
- > Norex-L pressure-equalized rainscreen joint ensures that the building envelope is well sealed
- > Factory-applied butyl joint sealer ensures maximum seal

## PRESSURE-EQUALIZED RAINSCREEN JOINT



- 1 AIR CAVITY
- 2 BUTYL
- 3 NOREX® FASTENER
- 4 STRUCTURAL ANGLE
- 5 VAPOR BARRIER

- 6 POLYETHYLENE
- 7 WEEP HOLE
- 8 FOUNDATION
- 9 TRIM HANGER
- 10 TRIM

## MAIN PHYSICAL PROPERTIES OF POLYISOCYANURATE

| PROPERTY   | METHOD        | RESULTS   |
|--|---------------|---|
| R Value / in. of thickness                       | ASTM C518     | 7.41  |
| Density (lb/ft <sup>3</sup> )                    | ASTM D1622    | Density (pcf) 2.29<br>Std dev 0.01  |
| Compressive strength (psi)                       | ASTMD1621     | 13.7 PSI (3 in. Thick Sample)   |
| Flextural strength (psi)                         | ASTM C203     | 25 – 30   |
| Permeability to water vapor (perms/in.)          | ASTM E96/E96M | < 2,0   |
| Water absorption (max.)                          | ASTM D2842    | < 1.5%  |
| Dimensional stability (max.)                     | ASTM 2126     | Dimensional Stability<br>Std dev 0.2<br>7 day Vol Chg<br>@ 70 °C/97 % R.H 4.3 |
| Linear thermal dilation coefficient (in./in./°F) | ASTM D696     | 35.47 x 10 – 6  |

# TESTS

|                         | PROCEDURE    | TITLE  | RESULTS  |
|-------------------------|--------------|--|--|
| <b>FIRE CANADA</b>      | CAN/ULC-S101 | Fire endurance tests of building construction and materials  | Meets 10 minutes stay-in-place requirements  |
|                         | CAN/ULC-S102 | Surface burning characteristics of building materials and assemblies   | Meets the National Building Code of Canada requirements  |
|                         | CAN/ULC-S134 | Fire test of exterior wall assemblies  | Complies with the fire-spread and heat-flux limitations required by the National Building Code of Canada |
|                         | CAN/ULC-S138 | Fire growth of insulated building panels in a full-scale room configuration  | Test requirements have been met  |
|                         | S-126        | Fire spread under roof deck assembly   | Test requirements have been met  |
| <b>FIRE US</b>          | ASTM E84     | Surface burning characteristics of building materials  | Flame spread < 25<br>Smoke developed < 450   |
|                         | FM 4880      | Class 1 fire rating of insulated wall, ceiling and roof panels   | Product approved up to 6 in. thick   |
|                         | NFPA 259     | Standard test method for potential heat of building materials  | Product tested   |
|                         | NFPA 286     | Standard test method for evaluating contribution of wall and ceiling interior finish to room fire growth   | Test requirements have been met  |
|                         | NFPA 285     | Standard Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components | Test requirements have been met  |
| <b>STRUCTURAL</b>       | ASTM E72     | Deflexion tests of panels for building construction  | See Load Chart   |
|                         | FM 4881      | Class 1 exterior wall structural performance   | See FM Wall load Chart   |
| <b>AIR INFILTRATION</b> | ASTM E283    | Rate of air leakage through curtain walls under specified pressure differences   | Test requirements have been met  |
|                         | ASTM E330    | Structural performance of exterior walls by uniform static air pressure difference   | Test requirements have been met  |
|                         | CAN-ULC-S741 | Tests methods for air barrier materials used in building applications  | Test requirements have been met  |
|                         | CAN-ULC-S742 | Tests methods for an air barrier assembly used in applications for both low-rise and high-rise buildings   | Test requirements have been met  |

# TESTS

|                            | PROCEDURE       | TITLE  | RESULTS   |
|----------------------------|-----------------|--|---|
| <b>THERMAL PERFORMANCE</b> | ASTM C518       | Steady-state thermal transmission properties by means of heat-flow meter apparatus | R 7.41 - Value 35/13°C k factor (W/m <sup>2</sup> - K/m) 19.5<br>R 769 - Value 18/-4°C k factor (W/m <sup>2</sup> - K/m) 18.8 |
|                            | CAN/ULC-S770-09 | Long term thermal resistance   | Testing requirements have been met per CAN/ULC-S704-11  |
| <b>WATER INFILTRATION</b>  | ASTM E331       | Water penetration of exterior walls by uniform static air pressure differences     | Test requirements have been met   |
|                            | AAMA 501.1      | Water penetration of exterior walls by dynamic air pressure                        | Test requirements have been met   |

Product availability is subject to change without notice and minimum quantities may be required for some product configurations. For more information, please contact your local representative.  
 All specifications provided in this document are current at the time of printing. However, because of the Norbec Architectural policy of continual product improvement, we reserve the right to make changes at any time without notice. Norbec.com - 1877 667-2321

