

# Thermally Broken Bracket

## Features

Mitrex Thermally Broken Bracket reduces thermal bridging in external rainscreen assemblies and improves insulation effective R-values while allowing for flexible facade design

It creates a thermal break between the building's interior and exterior and minimizes thermal transfer through the building envelope.

The system accommodates various insulation thicknesses or wall depths without the need for shims.

Suitable for concrete, concrete block, steel studs, or wood substrates.

The Mitrex Thermally Broken Bracket is recommended for high-performance building envelopes and supports energy conservation and sustainable building practices.

The clip is comprised of a 14-gauge galvanized steel bracket attached to a glass fibre reinforced polyamide thermal insulator pad.



## General Properties

|   | Test     | Imperial                | Metric                 |
|---|----------|-------------------------|------------------------|
| Density   | ISO 1183 | 0.05 lb/in <sup>3</sup> | 1.29 g/cm <sup>3</sup> |
| Water Absorption:<br>At saturation in air of<br>23°C / 50% R.H. | ISO 62   | 1.7%                    |                        |
| At saturation in water 23°C                                     | ISO 62   | 5.5%                    |                        |

## Mechanical Properties

|  | Test          | Imperial                                  | Metric                |
|--|---------------|---|-----------------------|
| Tensile Stress at Yield and Break            | ISO 527       | 12,328psi                                 | 85N/mm <sup>2</sup>   |
| Tensile Modulus of Elasticity                | ISO 527       | 725,188psi                                | 5000N/mm <sup>2</sup> |
| Compression Test: -1% Strain After 1,000 Hrs | ISO 899       | 6,236psi                                  | 43N/mm <sup>2</sup>   |
| Ball Indentation Hardness                    | ISO 2039      | 23,931psi                                 | 165N/mm <sup>2</sup>  |
| Charpy Impact Strength - Unnotched           | ISO 179-1/1eA | 2.38 10 <sup>7</sup> ftlb/in <sup>2</sup> | 50KJ/mm <sup>2</sup>  |
| Charpy Impact Strength - Notched             | ISO 179-1/1eU | 2.85 10 <sup>6</sup> ftlb/in <sup>2</sup> | 6 KJ/mm <sup>2</sup>  |
| Shore Hardness                               | ISO 2039      | 76 D                                      |                       |
| Coefficient of Friction to Steel             | ISO 8295      | -   |                       |
| Elongation at Break                          | ISO 527       | 0%  |                       |

## Electrical Properties

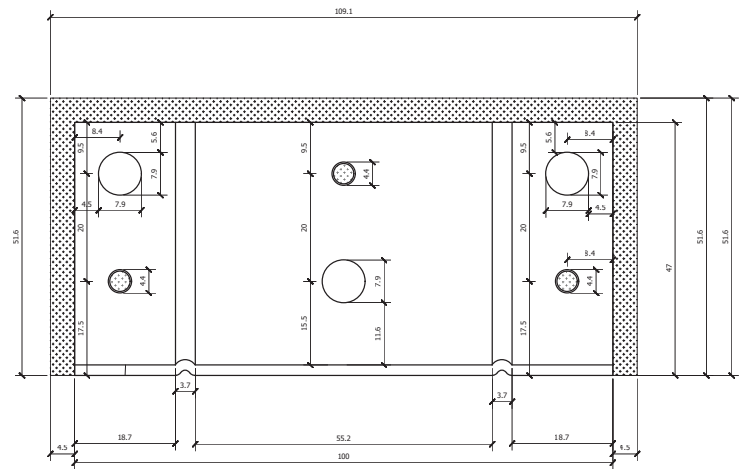
|                                      | Test    | Imperial | Metric               |
|--------------------------------------|---------|----------|----------------------|
| Volume Resistivity                   | ISO 93  | -        | 10 <sup>12</sup> Ωcm |
| Dielectric Strength                  | ISO 243 | 686KV/in | 27KV/mm              |
| Dielectric Constant                  | ISO 250 | 7        |                      |
| Dissipation Factor<br>Tan Δ at 1 MHz | ISO 250 | 0.04     |                      |

## Thermal Properties

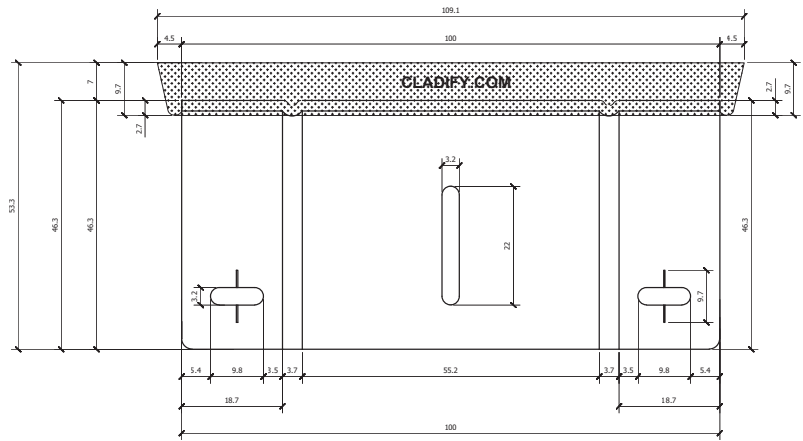
|  | Test        | Imperial | Metric                     |
|--|-------------|----------|----------------------------|
| Melting Temperature  | ISO 3156    | 500°F    | 260°C                      |
| Deformation Temperature  | ISO 75      | 302°F    | 150°C                      |
| Max. Allowable Service Temperature In Air:                                   |             |          |                            |
| Continuously   | -           | 248°F    | 120°C                      |
| Short Periods  | -           | 68°F     | 20°C                       |
| Minimum Service Temperature  | -           | -68°F    | -20°C                      |
| Thermal Conductivity at 23°C   | ISO 22007.2 | -        | 0.3W/m.K                   |
| Flamability  |             |          |                            |
| Oxygen Index   | ISO 4589    | -        | 0%                         |
| According to UL94 (3/6 Thickness)  | UL94        | -        | HB                         |
| Coefficient of Linear Thermal Expansion: Average Value between 23°C and 60°C | ISO 11359   | -        | 50 10 <sup>-6</sup> m(m.K) |

● Technical Drawing

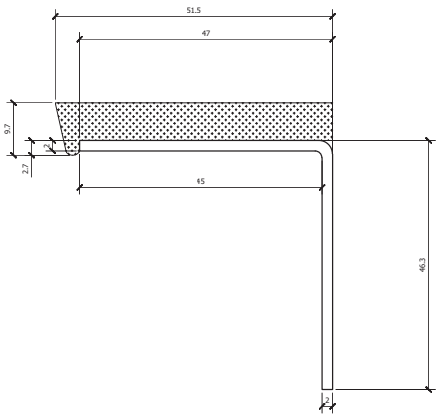
TOP VIEW



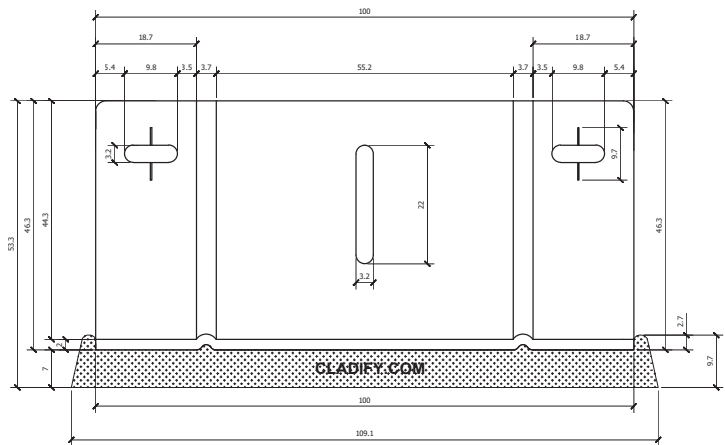
FRONT VIEW



SIDE VIEW



BOTTOM VIEW



WITH BUTYL SEALANT  
2 mm THICK AT THE  
BACK OF PLASTIC