TruProtect™ is a patented product that brings it all together: EMI/RFI shielding, insulation, radiant barrier, sound reduction, fire retardant, hail damage reduction—all of this while being environmentally friendly.

### RF Shielding

<table>
<thead>
<tr>
<th>Frequency</th>
<th>1&quot; TruProtect Attenuation (dB)</th>
<th>1/2&quot; TruProtect Attenuation (dB)</th>
<th>1/4&quot; TruProtect Attenuation (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 KHz, Magnetic Field</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>200 KHz, Electrical Field</td>
<td>100</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>1 MHz, Electrical Field</td>
<td>100</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>10 MHz, Electrical Field</td>
<td>100</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>80 MHz, Electrical Field</td>
<td>100</td>
<td>100</td>
<td>80</td>
</tr>
<tr>
<td>400 MHz, Plane Wave</td>
<td>100</td>
<td>&gt;90</td>
<td>60</td>
</tr>
<tr>
<td>700 MHz, Plane Wave</td>
<td>100</td>
<td>100</td>
<td>60</td>
</tr>
<tr>
<td>1 GHz, Plane Wave</td>
<td>100</td>
<td>100</td>
<td>60</td>
</tr>
<tr>
<td>10 GHz, Plane Wave</td>
<td>100</td>
<td>100</td>
<td>60</td>
</tr>
</tbody>
</table>

### Insulation

- **ASTM C 1363-97: Thermal Performance Test**
  - For 1" - R-value of 2.89
  - For 1/2" - R-value of 1.61
  - For 1/4" - R-value of 1

- **ASTM E903: Hemispherical Spectral Reflectance**
  - For 1/2" - 81.5% Solar Reflectance
  - For 1/4" - 80.4% Solar Reflectance

- **ASTM E408-71: Total Emittance Test**
  - For 1/2" - 0.02 Emittance, 0.88 Reflectance
  - For 1/4" - 0.03 Emittance, 0.97 Reflectance

### Hail Damage Protection

Tested according to UL 2218 Class 4 hail test. Test summary indicates 50% less surface damage and 100% less structural damage using 1/2" in comparison to a roof without TruProtect.

### Fire Retardant

- **ASTM E84-04: Surface Burning Characteristics**
  - Class A Fire Rating: Flame Spread Index = 25
  - Class A Smoke Rating: Smoke Developed Index = 20

### Noise Reduction

- **ASTM E90: Sound Transmission Loss Test**
  - For 1/2" - STC - 19; OITC - 15
  - For 1/4" - STC - 9; OITC - 7
  - For total assembly thickness 8": STC - 51; OITC - 35

- **NRC: Noise Reduction Coefficient**
  - For both 1" and 1/2" - 0.6

- **CAC: Ceiling Attenuation Class**
  - For 1" - 43
  - For 1/2" - 38

### Installation

- **Sizes**
  - TruProtect Panels: 4' x 8' x 1" — 4' x 8' x 1/2" — 4' x 8' x 1/4"
  - OSB backed TruProtect: 4' x 8' x 1" — 4' x 8' x 1/2" — 4' x 8' x 1/4"
  - Drywall backed TruProtect: 4' x 8' x 1" — 4' x 8' x 1/2" — 4' x 8' x 1/4"
  - Ceiling tiles: 2' x 4' x 1/2" — 2' x 2' x 1/2"

- **Weight**
  - For 4' x 8' x 1/2" sheet - 17 pounds
  - For 4' x 8' x 1/4" sheet - 8 pounds

- **Busting strength**
  - For 4' x 8' x 1/2" sheet - 450 pounds
  - For 4' x 8' x 1/4" sheet - 290 pounds

- **Equipment required**
  - No special safety clothing or equipment required.

### Environment Friendly

TruProtect is made of 95% recycled material and can help with LEED facility points. We have supplied LEED documents all over the USA.