



Game-changing PIM solutions

IsoTruss PIM Armor is an advanced material designed to attenuate interference caused by PIM in wireless communication infrastructure thereby increasing the overall quality of the signal. When IsoTruss PIM Armor is applied as a shielding device from external PIM sources, PIM is significantly reduced resulting in increased Signal-to-Noise Ratio (SNR) of the radio access network.

IsoTruss PIM Armor panels are water, UV, and corrosion resistant and maintenance free, generating significant savings over existing PIM reduction products.

Why IsoTruss PIM Armor™?

- Attenuates PIM up to 25 dB
- Easy installation up to 70% faster than other
- PIM mitigation
- Customizable color and size
- Weatherproof for water, UV, and wind
- Paintable to match site color
- Thin and durable - <1/8 inch and modular

Features / Value Proposition	PIM Foam	PIM Tape	PIM Paint	PIM Caulk	PIM Armor
Attenuates PIM	✓	✓	✓	✓	✓
Easy Installation		✓		✓	✓
Customizable	✓	✓			✓
Weatherproof			✓	✓	✓
Paintable			✓	✓	✓
Thin					✓
Structural					✓



Product Description and Specification

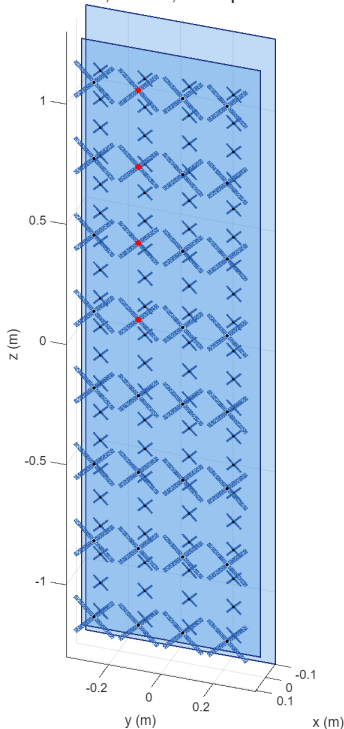
- Thickness: $< 1/8$ inch
- Max Temperature: 292°F (144.6°C)
- Density: 0.04 lb/in³ (1.15 g/cc)
- Size: Up to 12" diameter; customization available
- Standard Color: Gray; customization available

RF Characteristics

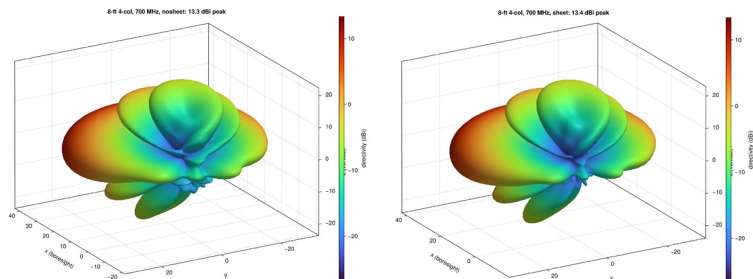
Metric	Value
Dielectric Constant (ϵ'')	82.82 ± 28.36
Loss tangent ($\tan \delta$)	2.326 ± 3.515
Return loss (per face)	1.9 dB
Coherent trans. ($ S_{21} $, kept)	-20.10 dB
Attenuation (bulk)	23.31 dB/cm
Bulk loss (per pass)	$23.31 \times 0.197 \text{ cm} \approx 4.59 \text{ dB}$
Two-face penalty (model)	8.95 dB
Est. transmission loss (model)	$4.59 + 8.95 \approx 13.5 \text{ dB}$
Shielding efficiency	20 dB @ 3 GHz

Performance Characteristics

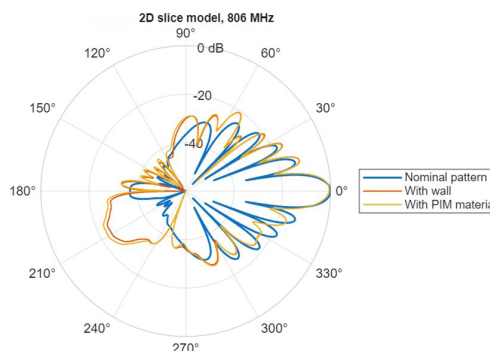
8-ft 4-column dual-band panel + back sheet, 700 MHz
(red = driven feeds, col 2 +45; black = parasitic feed sites)



IsoTruss PIM Armor attenuates up to 20 dBm and does not significantly impact lobe patterns.



IsoTruss PIM Armor placed behind the back plane of the antenna shows minimal effects to front lobe pattern.



IsoTruss PIM Armor placed on a parapet wall (5 feet in front of the antenna and 2 inches above the base) also shows minimal impact to the front lobe pattern.