

ME-2100

RF Isolation Fabric

ME-2100 OC

RF Isolation Fabric with Outer Cover



ME-2100 is a simple solution for effective RF signal attenuation in many commercial applications. It provides -100 dB RF isolation from 100 MHz to 1 GHz and more than -70 dB to 18GHz. Very light, thin, flexible, wear and tear resistant, it can be applied directly to studs, standard sheetrock and other materials using simple and inexpensive methods.

The product is well suited to both new and retrofit construction providing a degree of isolation typically seen with metal sheathing. It offers significant savings in labor, shipping and construction costs.

ME-2100 does not require specialized tools or techniques to apply and unlike competitive materials, needs virtually no physical space. This flexible product comes in rolls. Special shapes can be fabricated for custom applications.

Typical applications:

- RFID signal isolation and reduction of crosstalk from one area to another
- Security uses, including RF shielding to prevent the use of cellular telephones and other communication devices (including covert ones) in selected areas.
- Construction of RF quiet zones for scientific and developmental research.
- Isolation of noisy RF sources to protect sensors and receivers.
- Isolation of cell tower transmitters to protect building inhabitants.
- Extraneous Artifact Reduction in MRI and other High RF Flux Applications.
- Medical uses, including RF shielding for hospital instrumentation, and Intensive Care Units.
- Wideband EMI Shielding.

FEATURES:

Construction:

ME-2100 is a single layer flexible panel consisting of isolation ground plane material.

ME-2100 OC is the above material with an acrylic or urethane coated nylon pack cloth outer cover and is manufactured to the customer's size and shape requirements. It is available in standard black or grey. It can be waterproofed for outdoor applications. Grommets or D rings can be added at customer request.

Size:

ME-2100 Typically supplied in rolls of 39 in (99 cm). It can be cut to customer size requirements.
ME-2100 OC is made to order as per customer requirements and should not be cut.

Color:

ME-2100 is copper colored on both sides.

Mechanical properties:

Substrate	Polyester Nonwoven
Metal	Nickel over copper
Basis Weight	12-14 oz. /yard ²
Thickness	0.05 in (0.0127 cm)
Weight	Typically less than 0.1 lbs./ft ² (0.45 kg/m ²)
Thermal Stability	Range of -40°F to 160°F
Elongation MD	9% (per ASTM D5035)
Tensile Strength	7.5 /18.5 lb. /in (CMD / MD)
Hazardous Material	None
Visual Defects:	Uniform surface pattern and appearance
Thermal Cycles:	10 cycles, 1 hr/-20°F - 1 hr/70° F, no adverse effects
Low Temperature Impact:	-20°F, 1.5 ft. lbs., and no adverse effects
Effects of Liquids Oil:	No adverse effects after 1000 hours (ASTM-B-117)
Effects of Liquids, Water:	Less than 6% increase in volume (ASTM-D-471)

Performance:

-100 dB RF isolation from 100 MHz to 1 GHz

Greater than -70 dB RF isolation from 1 GHz to over 18 GHz

Nail, screw and staple punctures have no effect on signal attenuation