MWT Materials Inc.
Providing RF Control Solutions

90 Dayton Avenue
Building 10, Suite 3I
Passaic, New Jersey 07055

Tel +1 973-928-8300
www.mwtmaterials.com

ME-300 Series RF Absorbers

Electrical RF Absorber for the Elimination of Electronic Interference

MWT'S ME 300 series are thin, flexible electrical absorbers designed for the suppression of microwave surface currents over the frequency range of 0.6 to 16 GHz. ME-300 has scores of applications for analog and digital electronic devices, minimizing cross talk and interference.

The material is available in a urethane acrylic (ME-310) or silicone rubber (ME-320) binder system. The main advantage of the silicone version is its large range of service temperatures, whereas the urethane version has better mechanical and bonding properties. ME-300 products are impervious to water and may be used outdoors. Special processing is employed such that the electrical performance of the ingredients is stable over a wide environmental range. The product is an economical and light weight alternative to ferrite loaded and MagRAM elastomers.

ME-310 is useful for the suppression of surface and creeping waves, reduction of cavity resonance in microwave modules and is also useful in reducing RF coupling of antennas and microwave components. The product is flexible, permitting application to contoured surfaces. The service temperature is 350° F (177° C) continuous with short term exposures to higher temperatures. This product has a smooth surface, and can be exposed to outdoor environments and high altitudes, including space, with no adverse effects.

ME-300 products are also available in a thin film bonded to a 2 mil aluminum substrate, and may be ordered die cut to your requirements. If desired, it can be supplied in roll form up to 100 yards long.

FEATURES:

- Minimum of -60 dB isolation from 50 MHz to 18 GHz
- Good Flexibility
- Corrosion Resistant
- High Wear
- Tear Resistant
- High Tensile Strength
- POL (Petroleum, Oil, Lubricant) Resistant
- Fire resistant (UL 94 V0 rated)

MWT Materials Inc.
Providing RF Control Solutions

90 Dayton Avenue
Building 10, Suite 3I
Passaic, New Jersey 07055

Tel +1 973-928-8300
www.mwtmaterials.com

Construction:
Micronized conductive particulates loaded in a urethane (ME-310) or silicone (Me-320) binder system

Color:
Charcoal Gray

Mechanical Properties:
Panels 30.5 cm² (12 in²) to 61 cm² (24 in²)
Die cut to size
Rolls to 100 m (yds) long
0.08 cm (0.030") thick

Electrical Performance (Insertion Loss)
48 dB/in @ 3 GHz
180 dB/in @ 10 GHz

Representative Properties

Attenuation, dB/cm	6.0 - 63.0
Relative Impedance	0.66 - 0.23
Volume Resistivity, ohm-cm	$2x10^8$
Dielectric Strength, volts/mil	> 20
Nominal Thickness, inches (mm)	0.03 (0.8)
Nominal Weight lb/ft^2 (kg/m^2)	0.90 (4.4)
Hardness, Shore A	> 80
Tensile Strength, PSI	> 500
Elongation, %	> 23
Thermal Conductivity (BTU)(in)/(hr) (ft^2)(°F)	8.7
(Cal)(cm)/(sec)(cm^2)(°C)	0.003