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**Product
Bulletin**

300-10

**MICROSORB MT-SC-4000
SILICON CARBIDE MICROWAVE ABSORBER**

MICROSORB MT-SC is a series of high loss magnetically loaded silicon carbide based material suitable for use as terminations, loads, attenuators and in the suppression of unwanted microwave energy.

MICROSORB MT-SC is ideal for applications requiring temperature cycling and environmental conditions as the elastomeric chemistry allows for expansion/contraction caused by temperature change.

SPECIFICATIONS:

Chemical analysis

Silicon carbide:	78%
Bond:	20%
Iron oxide:	0.9%
Other oxides:	1.1%

Maximum Use temperature:

1800°F, (982°C)

Most commonly used Grit size: 240

Density:

18 lbs/ft³ (31.2 grams/in³) (1.9 grams/cm³)

Linear Thermal expansion:

2.8 x 10⁻⁶ per °F (average)

Thermal Conductivity (BTU-in/hr.ft.².°F):

100°F:	94
200°F:	105
400°F:	115
600°F:	125
1200°F:	120
1800°F:	104
2100°F:	100

SPECIFICATIONS, CONTINUED:

Total emissivity: 0.92
 Electrical Resistivity (ohm-cm):

Room temp:	280 –500
2100 °F:	2-3

Porosity: 15%
 Relative Permeability: 1.00
 Relative permittivity: 16 ± 2
 (depending on grit size and batch characteristics)

Measured results on batch dated 7/21/06:
 er = 16.5 (10 GHz)

Dielectric Loss Tangent: 0.15 - 0.25
 (depending on grit size and batch characteristics)

Measured results on batch dated 7/21/06:

Loss Tangent: 0.17 @10 GHz

Electrical attenuation:
 50 db / inch at 10.0 GHz.

Out-gassing characteristics in a vacuum

Total mass loss, (TML) : < 0.30 %

Collected Volatile Condensable Materials:
 (CVCM) <0.050%

NASA Criteria for space acceptance:

TML < 1.0% CVCM < 0.10%

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