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**Product  
Bulletin**

**400-05**

**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/ft<sup>3</sup> (31.2 grams/in<sup>3</sup>) (1.9 grams/cm<sup>3</sup>)

Linear Thermal expansion:

2.8 x 10<sup>-6</sup> per °F (average)

Thermal Conductivity (BTU-in/hr.ft.<sup>2</sup>.°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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Rev 2 042407