Shielding Solutions Surface wave absorber is a thin very highly loaded sheet stock having high loss at microwave frequencies, while maintaining the desirable characteristics of elastomeric binders. Surface wave absorbers are the most heavily magnetically loaded absorber. Surface wave absorbers are designed to exhibit the highest loss and are intended to be applied to metal surfaces for traveling or surface wave attenuation. Surface wave absorbers attenuate traveling wave energy at frequencies from 1 GHz to 20 GHz.

### Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardness - Shore A</td>
<td>60 - 80</td>
</tr>
<tr>
<td>Flammability Rating (Halogen Free)</td>
<td>UL94 V-0</td>
</tr>
<tr>
<td>Elastomer</td>
<td>Silicone</td>
</tr>
<tr>
<td>Operating Temperature (°C)</td>
<td>-50 to 190</td>
</tr>
<tr>
<td>Colour</td>
<td>Dark Grey</td>
</tr>
<tr>
<td>Thickness - mm</td>
<td>0.5 – 3.2</td>
</tr>
</tbody>
</table>

### Availability

- Standard sheets are 305 x 305mm (12”x12”) with or without PSA
- 610 x 610mm Sheets available
- Thickness varies depending on resonant frequency desired.
- Other base materials available (i.e. Urethane).
- The material can also be supplied in customized shapes.
RAM-SW001 Magnetically Loaded Thin Flexible, Resonant, Microwave Absorber Material

Shielding Effectiveness

Surface Wave Absorbers

Reflectivity Performance

Reflectivity (dB)

Frequency (GHz)

Application

- RAM-SW001 is designed to function directly in front of a metallic surface. If this is not the case, a metallic foil should first be bonded to the object.
- Epoxy and acrylic adhesives are recommended or use the self-adhesive version.
- To obtain a strong bond of the absorber to the object, the metallic surface should first be thoroughly cleaned with a degreasing solvent.
- RAM-SW001 can be readily cut with a sharp knife and template. It is a very flexible material and conforms to contoured surfaces.
RAM-SW001 Magnetically Loaded Thin Flexible, Resonant, Microwave Absorber Material

**Applications**

- Traveling, creeping, surface wave absorption
- Resonant Cavity Attenuation
- EMI Reduction
- Mounted to an IC on a PCB or directly to a microstrip
- High Frequency Interference
- Inside a shielding can
- Specular Return (RCS)