

Oriented Wire in Silicone

SURSHIELD oriented wire sheet is manufactured in two compositions of silicone – solid and foam – each impregnated with conductive monel or aluminium wires which are chemically bonded to the silicone and are convoluted to minimise compression set.

54-MWS-112 material employs a solid grey silicone compound with typical wire density of 140 strands per cm². 55MWS-025 uses a soft closed cell silicone foam with typically 100 contact points per cm². Aluminium wire versions are similar.

Application: Both types are designed for use in providing excellent performance in broadband EMI shielding, along with good environmental sealing for military, industrial and commercial applications. The sponge construction is particularly recommended for uneven closure surface and where relatively low closure pressure is required, 34.5-345 Kpa (5-50psi), and, for 54-MWS-112, 172-690 Kpa (25-100psi). Pressure sensitive adhesive can be used for fixing gaskets in place.

Customised products: Gaskets can be readily cut from both types of material strip by use of die-cutting tools. For most effective shielding, the mating surfaces of the enclosure should be stripped to bare metal and a protective coating applied. Various widths and thickness can be supplied to special order as can strip backed with pressure sensitive adhesive (PSA).

Standard dimensions: The standard SURSHIELD strip sizes are in 900mm lengths and 114 wide (some larger widths are possible) but can be readily slit down to 3.2, 4.8, 6.4, 9.5, 12.7, 15.9 and 25.4mm width strips. Oriented wire in silicone polymers are typically manufactured in the following standard thicknesses: 0.8, 1.6, 2.4 and 3.2mm.

Applications	<ul style="list-style-type: none"> Gaskets Seals Shielding
Product Features	<ul style="list-style-type: none"> Effective shielding Potential for pressure sensitive adhesive
Markets	<ul style="list-style-type: none"> Industrial Military

Typical properties

Product Property	Value	Test Method	Footnotes
PART NUMBER	54-MWS-112		When a pressure sensitive adhesive layer is required, the part number should be suffixed /A.
Material	Monel Wire in Grey Solid Silicone		
Shielding Effectiveness	70dB (200 kHz), 125dB (100 MHz), 125dB (1 GHz)		
Temperature Range (°C)	-65 to +200		
PART NUMBER	55-MWS-025		When a pressure sensitive adhesive layer is required, the part number should be suffixed /A.
Material	Monel Wire in grey silicone foam		
Shielding Effectiveness	70dB (200 kHz), 120dB (100 MHz), 125dB (1 GHz)		
Temperature Range (°C)	-65 to +200		
PART NUMBER	54-AWS-112		When a pressure sensitive adhesive layer is required, the part number should be suffixed /A.
Material	Aluminium wire in grey solid silicone		
Shielding Effectiveness	70dB (200 kHz), 100dB (100 MHz), 100dB (1 GHz)		
Temperature Range (°C)	-65 to +200		
PART NUMBER	55-AWS-025		When a pressure sensitive adhesive layer is required, the part number should be suffixed /A.
Material	Aluminium wire in grey silicone foam		
Shielding Effectiveness	70dB (200 kHz), 85dB (100 MHz), 70dB (1 GHz)		
Temperature Range (°C)	-65 to +200		

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