

Code 821

ORIENTED WIRE IN SILICONE

Section C

DESCRIPTION

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. In addition a solid fluorosilicone version is available.

54-MWS-112 material employs a solid grey silicone compound with standard wire density of 100 strands per cm². The solid Fluorosilicone with Monel wires is grade 54-MWF-112. 55-MWS-025 uses a soft closed cell silicone foam with 70 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 (5-50 psi) and for 54-MWS-112 is 172-690 Kpa (25-100 psi). Pressure sensitive adhesive can be used for fixing gaskets in place.

CUSTOMISED PRODUCTS

Gaskets can readily be 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 conductive coating applied. Various widths and thickness can be supplied to special order, as can strip backed with pressure-sensitive adhesive (PSA). Sheet and strip can also be manufactured in a fluorosilicone elastomer, where the gasket may be in proximity to hydraulic fluids, petroleum or kerosene.



TYPICAL PROPERTIES

Gasket Material	Shielding Effectiveness dB			Temperature	Part
	200kHz	100MHz	1GHz	Range (°C)	Number
Monel Wire in Grey Solid Silicone	70	125	125	-65 to +200	54-MWS-112
Monel Wire in Grey Silicone Foam	70	120	125	-65 to +200	55-MWS-025
Monel Wire in Solid Fluorosilicone	70	100	100	-55 to +200	54-MWF-112
Aluminium Wire in Grey Solid Silicone	70	100	100	-65 to +200	54-AWS-112
Aluminium Wire in Grey Silicone Foam	70	85	70	-65 to +200	55-AWS-025

STANDARD DIMENSIONS

The standard SURSHIELD strip sizes are in 900mm lengths and 114mm wide (some larger widths are possible) but can readily be slit down to 3.2, 4.8, 6.4, 9.5, 12.7, 15.9 and 25.4mm width strips. All oriented wire in silicone and fluorosilicone polymers are manufactured in the following standard thicknesses: 0.8, 1.6, 2.4 and 3.2 mm. When a pressure sensitive adhesive layer is required the part number should be suffixed /A.

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