

Mesh Over Elastomer

Product Summary

MAJR Products 1500 Series of elastomer core knitted wire mesh shielding strip gaskets provides a balance between optimum shielding and resiliency due to the conductive wire mesh over an elastomer core respectively. For galvanic compatibility a wide variety of knitted wire mesh and various core materials are available.

Product Application

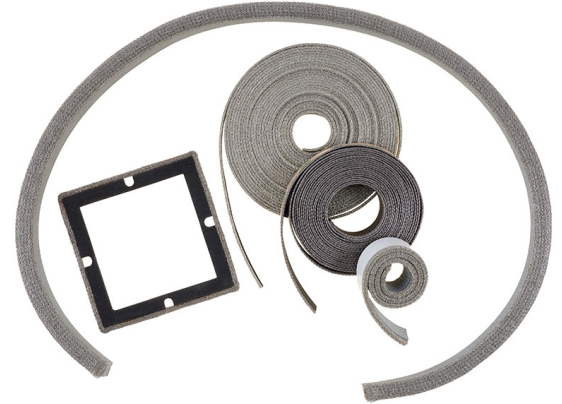
Excellent Resiliency: With an elastomer core there is assurance of continued pressure over the entire length of the gasket.

Moisture and/or Dust Protection: With two covers of mesh over an elastomer, the elastomer under pressure protrudes through the mesh to give sealing protection.

Wide Range of Materials: The designer can choose from a wide range of materials to satisfy EMI requirements while providing for corrosion protection and sealing criteria. See Table 2 for materials.

Excellent Attenuation Characteristics: The MAJR elastomer core shielding strip gives a high degree of attenuation in the H-Field, E-Field, as well as plane wave. The attenuation varies from over 95-100 dB in the E-Field to 35-85 dB in the H-Field.

Versatility of Mounting Methods: The enclosure engineer has the option of using a groove design for holding the strip or using the mesh fin as a convenient way of strip mounting.



Technical Information

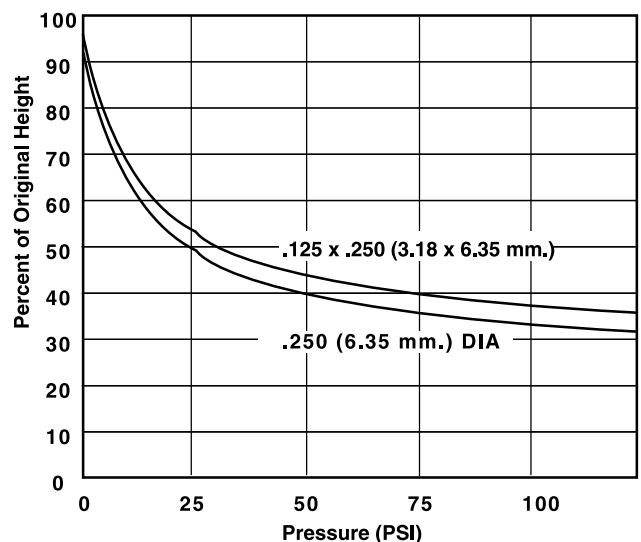
Shielding Effectiveness vs Frequency — Table 1

Field	Material Code -02-04							
	Frequency							
	10 kHz	100 kHz	1 MHz	18 MHz	100 MHz	400 MHz	1 GHz	10 GHz
H	35	45	65	—	—	—	—	—
E	—	—	—	95	—	—	—	—
PW	—	—	—	—	95	85	75	65

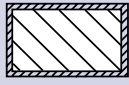
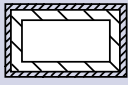


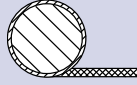
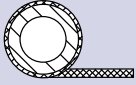
Field	Material Code -10-12							
	Frequency							
	10 kHz	100 kHz	1 MHz	18 MHz	100 MHz	400 MHz	1 GHz	10 GHz
H	45	60	85	—	—	—	—	—
E	—	—	—	100	—	—	—	—
PW	—	—	—	—	95	85	80	70

This data is for comparison and is not to be stated as a pass/fail specification for Mesh Over Elastomer EMI Gaskets.

Pressure vs Height Deflection — Figure 1



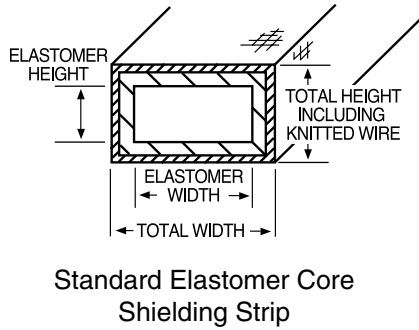
Material Selection Guide – Table 2

Strip Shape							
KNIT WIRE AVAILABLE	MONEL ALUMINUM SILVER-BRASS TIN-FERROUS	YES YES YES YES	YES YES YES YES	YES YES YES YES	YES YES YES YES	YES YES YES YES	YES YES YES YES
ELASTOMER CORE AVAILABLE	NEO-SPONGE NEO-SOLID SIL.SPONGE SIL.SOLID	YES YES YES YES	NO YES NO YES	YES YES YES YES	NO YES NO YES	YES YES YES YES	NO YES NO YES
EMI RATING	10 kHz H-FIELD 18 MHz E-FIELD 1 GHz PLANE WAVE	25 to 35 dB 95 to 115 dB 75 to 100 dB	25 to 35 dB 95 to 115 dB 75 to 100 dB	25 to 35 dB 95 to 115 dB 75 to 100 dB	25 to 35 dB 95 to 115 dB 75 to 100 dB	25 to 35 dB 95 to 115 dB 75 to 100 dB	25 to 35 dB 95 to 115 dB 75 to 100 dB
ENVIRONMENTAL SEAL	DUST RAIN & DRIP PROOF	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
PRESSURE SEAL	30 PSI UP	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR
MOUNTING METHOD	GROOVE ADHESIVE BOLT	EXCELLENT GOOD GOOD	EXCELLENT GOOD FAIR	EXCELLENT FAIR —	EXCELLENT FAIR —	— EXCELLENT EXCELLENT	— EXCELLENT EXCELLENT
MINIMUM PRESSURE	—	15 PSI	15 PSI	5 PSI	5 PSI	5 PSI	5 PSI
MOUNTING	GROOVE COMP. STOP	YES YES	YES YES	YES NO	YES NO	YES NO	NO YES
GROOVE DEPTH OR COMPRESSION HEIGHT	STRIP HT .06 -0.25" .25 - .50" .50- 1.0"	85% of HT 80% of HT 75% of HT	85% of HT 80% of HT 75% of HT	75% of HT 75% of HT 70% of HT	75% of HT 75% of HT 70% of HT	75% of HT 75% of HT 70% of HT	75% of HT 75% of HT 70% of HT
TEMP. RANGE	SIL. SOLID SIL. SPONGE NEO. SOL NEO. SPONGE	-80 to 425°F -103 to 400°F -65 to 212°F -40 to 150°F	-80 to 425°F -103 to 400°F -65 to 212°F -40 to 150°F	-80 to 425°F -103 to 40°F -65 to 212°F -40 to 150°F	-80 to 425°F -103 to 400°F -65 to 212°F -40 to 150°F	-80 to 425°F -103 to 400°F -65 to 212°F -40 to 150°F	-80 to 425°F -103 to 400°F -65 to 212°F -40 to 150°F

Mesh Over Elastomer



Rectangular Shaped Gasket - Sponge Elastomer



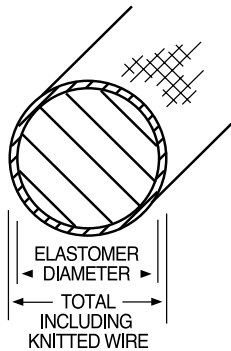
Monel Wire — Table 3

Elastomer Height	Elastomer Width	Total Height	Total Width	Neoprene Sponge Part Number	Silicone Sponge Part Number
.125 (3.18)	.125 (3.18)	.160 (4.06)	.160 (4.06)	1510-12012-02	1510-12012-04
.125 (3.18)	.188 (4.78)	.160 (4.06)	.225 (5.72)	1510-12019-02	1510-12019-04
.125 (3.18)	.250 (6.35)	.160 (4.06)	.285 (7.24)	1510-12025-02	1510-12025-04
.188 (4.78)	.188 (4.78)	.225 (5.72)	.225 (5.72)	1510-19019-02	1510-19019-04
.250 (6.35)	.250 (6.35)	.285 (7.24)	.285 (7.24)	1510-25025-02	1510-25025-04
.250 (6.35)	.500 (12.70)	.285 (7.24)	.535 (13.59)	1510-25050-02	1510-25050-04

Tin Plated Ferrous Wire — Table 4

Elastomer Height	Elastomer Width	Total Height	Total Width	Neoprene Sponge Part Number	Silicone Sponge Part Number
.125 (3.18)	.125 (3.18)	.160 (4.06)	.160 (4.06)	1510-12012-10	1510-12012-12
.125 (3.18)	.188 (4.78)	.160 (4.06)	.225 (5.72)	1510-12019-10	1510-12019-12
.125 (3.18)	.250 (6.35)	.160 (4.06)	.285 (7.24)	1510-12025-10	1510-12025-12
.188 (4.78)	.188 (4.78)	.225 (5.72)	.225 (5.72)	1510-19019-10	1510-19019-12
.250 (6.35)	.250 (6.35)	.285 (7.24)	.285 (7.24)	1510-25025-10	1510-25025-12
.250 (6.35)	.500 (12.70)	.285 (7.24)	.535 (13.59)	1510-25050-10	1510-25050-12

Round Section - Sponge Elastomer Core



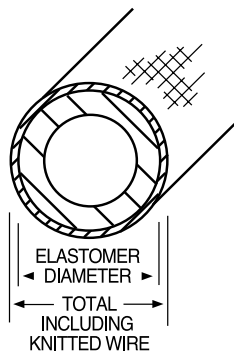
Monel Wire — Table 5

Elastomer Diameter	Total Diameter Over Wire	Neoprene Sponge Part Number	Silicone Sponge Part Number
.062 (1.57)	.098 (2.49)	1511-06000-02	1511-06000-04
.125 (3.18)	.160 (4.06)	1511-12000-02	1511-12000-04
.188 (4.78)	.225 (5.72)	1511-19000-02	1511-19000-04
.250 (6.35)	.285 (7.24)	1511-25000-02	1511-25000-04
.312 (7.92)	.348 (8.84)	1511-31000-02	1511-31000-04
.375 (9.53)	.410 (10.41)	1511-38000-02	1511-38000-04
.500 (12.70)	.535 (13.59)	1511-50000-02	1511-50000-04

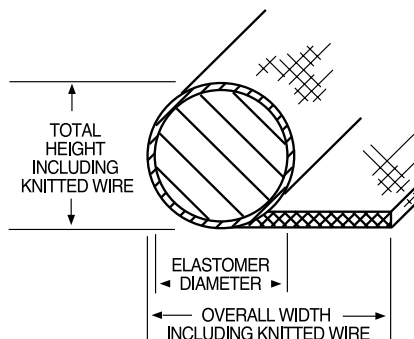
Tin Plated Ferrous Wire — Table 6

Elastomer Diameter	Total Diameter Over Wire	Neoprene Sponge Part Number	Silicone Sponge Part Number
.062 (1.57)	.098 (2.49)	1511-06000-10	1511-06000-12
.125 (3.18)	.160 (4.06)	1511-12000-10	1511-12000-12
.188 (4.78)	.225 (5.72)	1511-19000-10	1511-19000-12
.250 (6.35)	.285 (7.24)	1511-25000-10	1511-25000-12
.312 (7.92)	.348 (8.84)	1511-31000-10	1511-31000-12
.375 (9.53)	.410 (10.41)	1511-38000-10	1511-38000-12
.500 (12.70)	.535 (13.59)	1511-50000-10	1511-50000-12

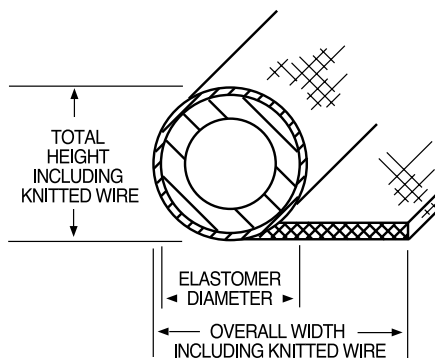
Round Section - Solid Silicone Elastomer Tubing Core



Single Fin



Single Fin Section - Silicon Solid Tubing Core



Monel Wire & Tin Plated Steel — Table 7

Tubing Dia (O.D.)	Diameter Over Wire	Monel Wire Part Number	Tin Plated Steel Part Number
.125 (3.18)	.160 (4.06)	1511-12000-18	1511-12000-19
.188 (4.78)	.225 (5.72)	1511-19000-18	1511-19000-19
.250 (6.35)	.285 (7.24)	1511-25000-18	1511-25000-19
.312 (7.92)	.348 (8.84)	1511-31000-18	1511-31000-19
.375 (9.53)	.410 (10.41)	1511-38000-18	1511-38000-19
.500 (12.70)	.535 (13.59)	1511-50000-18	1511-50000-19

e Elastomer Core

Monel Wire — Table 8

Elastomer Diameter	Total Height	Overall Width	Neoprene Sponge Part Number	Silicone Sponge Part Number
.125 (3.18)	.160 (4.06)	.500 (12.70)	1512-12050-02	1512-12050-04
.125 (3.18)	.160 (4.06)	.750 (19.05)	1512-12075-02	1512-12075-04
.188 (4.78)	.225 (5.72)	.625 (15.88)	1512-19063-02	1512-19063-04
.188 (4.78)	.225 (5.72)	.750 (19.05)	1512-19075-02	1512-19075-04
.250 (6.35)	.285 (7.24)	.750 (19.05)	1512-25075-02	1512-25075-04
.250 (6.35)	.285 (7.24)	1.000 (25.40)	1512-25100-02	1512-25100-04
.500 (12.70)	.535 (13.59)	1.000 (25.40)	1512-50100-02	1512-50100-04

Tin Plated Ferrous Wire — Table 9

Elastomer Diameter	Total Height	Overall Width	Neoprene Sponge Part Number	Silicone Sponge Part Number
.125 (3.18)	.160 (4.06)	.500 (12.70)	1512-12050-10	1512-12050-12
.125 (3.18)	.160 (4.06)	.750 (19.05)	1512-12075-10	1512-12075-12
.188 (4.78)	.225 (5.72)	.625 (15.88)	1512-19063-10	1512-19063-12
.188 (4.78)	.225 (5.72)	.750 (19.05)	1512-19075-10	1512-19075-12
.250 (6.35)	.285 (7.24)	.750 (19.05)	1512-25075-10	1512-25075-12
.250 (6.35)	.285 (7.24)	1.000 (25.40)	1512-25100-10	1512-25100-12
.500 (12.70)	.535 (13.59)	1.000 (25.40)	1512-50100-10	1512-50100-12

Monel Wire & Tin Plated Steel — Table 10

Tubing Diameter (O.D.)	Diameter Over Wire	Overall Width	Monel Wire Part Number	Tin Plated Steel Part Number
.125 (3.18)	.160 (4.06)	.500 (12.70)	1512-12050-18	1512-12050-19
		.750 (19.05)	1512-12075-18	1512-12075-19
.188 (4.78)	.225 (5.72)	.625 (15.88)	1512-19063-18	1512-19063-19
		.750 (19.05)	1512-19075-18	1512-19075-19
.250 (6.35)	.285 (7.24)	.750 (19.05)	1512-25075-18	1512-25075-19
		1.00 (25.40)	1512-25100-18	1512-25100-19
.312 (7.92)	.348 (8.84)	.625 (15.88)	1512-31063-18	1512-31063-19
		1.00 (25.40)	1512-31100-18	1512-31100-19
.375 (9.53)	.410 (10.41)	.750 (19.05)	1512-38075-18	1512-38075-19
		1.12 (28.00)	1512-38112-18	1512-38112-19
.500 (12.70)	.535 (13.59)	1.00 (25.40)	1512-50100-18	1512-50100-19
		1.25 (31.25)	1512-50125-18	1512-50125-19