

METAL IMPREGNATED MATERIALS

ELECTROMET™ ORIENTED WIRE

ElectroMet oriented wire gaskets are EMI shielding and sealing composites. Monel® or aluminum wires embedded in the elastomer and oriented perpendicular to the mating surfaces provide the EMI sealing. Solid or sponge silicone provides the weather sealing; however, solid silicone weather seals are recommended for high-pressure applications.

Silicone based oriented wire composites are capable of withstanding temperature ranges from -70°F to 500°F (-56°C to 260°C). Oriented wire materials are available in sheet or strip form with a minimum thickness of 0.032 in. (0,8 mm). Material specifications and information for standard sheets and strips are provided in Tables 1 through 3.

TABLE 1.

MATERIAL CODE	ELASTOMER	WIRE SPECIFICATION
55	Silicone Sponge Per AMS 3195	Monel: Alloy Per QQ N281 Dia. 0.0045 (0,114)
56	Silicone Solid Per ZZR765 Class 2b Grade 40	Monel: Alloy Per QQ N281 Dia. 0.0045 (0,114)
58	Silicone Sponge Per AMS 3195	Aluminum: Alloy 5056 Per AMS 4182 Dia. 0.005 (0,127)
59	Silicone Solid Per ZZR765 Class 2b Grade 40	Aluminum: Alloy 5056 Per AMS 4182 Dia. 0.005 (0,127)

Note: Wire density per sq. in.: 700–900; per sq. cm 108–139
55 not available in thickness below .062"



TABLE 2. ELECTROMET SHEET MATERIALS

END VIEW	PART NO.	DIMENSIONS	
		A. WIDTH	B. THICKNESS
	8408-0200-XX	3.000 (76,2)	0.032 (0,8)
	8408-0203-XX	3.000 (76,2)	0.045 (1,1)
	8408-0206-XX	3.000 (76,2)	0.062 (1,6)
	8408-0209-XX	3.000 (76,2)	0.093 (2,4)
	8408-0212-XX	3.000 (76,2)	0.125 (3,2)
	8408-0213-XX	3.000 (76,2)	0.187 (4,8)
	8408-0215-XX	4.500 (114,3)	0.032 (0,8)
	8408-0218-XX	4.500 (114,3)	0.045 (1,1)
	8408-0221-XX	4.500 (114,3)	0.062 (1,6)
	8408-0227-XX	4.500 (114,3)	0.125 (3,2)
	8408-0230-XX	6.000 (152,4)	0.032 (0,8)
	8408-0242-XX	6.000 (152,4)	0.125 (3,2)
	8408-0245-XX	9.000 (228,6)	0.032 (0,8)
	8408-0248-XX	9.000 (228,6)	0.045 (1,1)
	8408-0251-XX	9.000 (228,6)	0.062 (1,6)
	8408-0254-XX	9.000 (228,6)	0.093 (2,4)
	8408-0257-XX	9.000 (228,6)	0.125 (3,2)

HOW TO SPECIFY

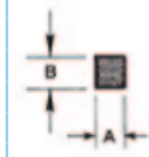
- For PSA, change the fifth digit to 9 for items with tape.
Example: 8408-0200-59 becomes 8408-9200-59.
- Replace XX with material code from Table 1.
Example: To request a 3.0 in. (76,2 mm) wide x 0.032 in. (0,8 mm) thick strip with aluminum wire in solid silicone sponge, use 8408-0200-59.

For further information or for product samples, please contact Laird Technologies sales department.

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TABLE 3. ELECTROMET STRIP MATERIALS

PART NO	DIMENSIONS	
	A. WIDTH	B. THICKNESS
8408-0120-XX	0.125 (3,2)	0.125 (3,2)
8408-0130-XX	0.125 (3,2)	0.250 (6,4)
8408-0127-XX	0.187 (4,8)	0.187 (4,8)
8408-0110-XX	0.250 (6,4)	0.062 (1,6)
8408-0123-XX	0.250 (6,4)	0.125 (3,2)
8408-0133-XX	0.250 (6,4)	0.250 (6,4)
8408-0111-XX	0.312 (7,9)	0.062 (1,6)
8408-0140-XX	0.312 (7,9)	0.250 (6,4)
8408-0116-XX	0.500 (12,7)	0.062 (1,6)
8408-0126-XX	0.500 (12,7)	0.125 (3,2)
8408-0118-XX	0.625 (15,9)	0.062 (1,6)
8408-0128-XX	0.625 (15,9)	0.125 (3,2)
8408-0117-XX	0.750 (19,1)	0.062 (1,6)
8408-0294-XX	1.000 (25,4)	0.093 (2,4)



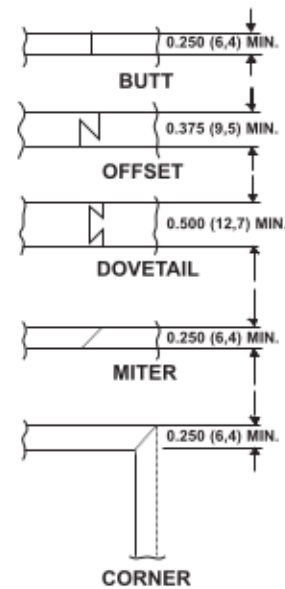
TOLERANCE

SIZE RANGE	WIDTH	THICKNESS
To 0.062 (1,6)	N/A	+0.010 (+0,3) / -0.005 (-0,1)
0.070 to 0.250 (1,8 to 6,4)	± 0.015 (0,4)	± 0.010 (0,3)
0.251 to 0.375 (6,4 to 9,5)	± 0.030 (0,8)	± 0.015 (0,4)

SPLICING TECHNIQUES

Oriented wire can be supplied as a one-piece gasket. Gasket sizes are available up to 9 in. (228,6 mm) X 36 in. (914,4 mm) frame size. Larger gaskets are normally spliced using one of the splicing techniques shown in Figure 1. These splicing methods minimize elastomer waste when compared to jointless gasket design. In preparing drawings, designate the splicing method and locations if splices are permitted.

FIGURE 1. FOUR BASIC SPICING TECHNIQUES



COMPRESSION-DEFLECTION FOR SOLID SILICONE

MATERIAL THICKNESS	COMPRESSION FORCE PSI (MPa) AT DEFLECTION OF:			
	5%	*10%	15%	20%
0.045 (1,1)	40 (0,3)	100 (0,7)	155 (1,1)	280 (1,9)
0.062 (1,6)	85 (0,6)	165 (1,1)	240 (1,7)	345 (2,4)
0.125 (3,2)	115 (0,8)	180 (1,2)	245 (1,7)	290 (2,0)

*Recommended

Note: Compression force for silicone sponge is approximately 15 psi to 75 psi. Silicone sponge density is 0.02 lb/in³.