

Conductive Foam offers an innovative approach to traditional shielding and grounding by providing X, Y, and Z-axis conductivity, which enhances the shielding effectiveness required to meet the increasing microprocessor speeds of today's computer, telecommunications, and aerospace equipment.

Conductive Foam is designed for low-cycling applications such as input/output (I/O) shielding and other non-shear standard connectors. Rectangular strips are available for perimeter gasketing applications.

FEATURES AND BENEFITS

- Halogen free conductive foam gaskets are compliant with the European RoHS hazardous substance directive 2011/65/EU. US patent number 7,060,348
- Improved Z-axis conductivity increases shielding effectiveness to over 90 dB across a wide range of frequencies.
- Available in 0.039" (1 mm), 0.060" (1.5 mm), 0.079" (2 mm), 0.098 (2.5 mm), 0.125" (3.2 mm), thicknesses and widths down to 0.250" (6.4 mm).
- Wide compression ranges of up to 60% of original uncompressed thicknesses.
- UL94 V-0 Flammability Rating, UL file number OCDT2.E170327, UL designation code: V0 033
- Available in many standard configurations including D-sub, USB port, IEEE 1394, SCSI, and RJ 11 connector. Also available in sheet stock and rectangular profiles.
- Custom die-cut versions are also available.
- Die-cut I/O designs, Rectangle Strip gaskets and backplane gaskets can be supplied with or without conductive adhesive.
- Conductive Foam has a low compression set ensuring long term gasket performance.
- The recommended operating compression for Conductive Foam EMI gaskets will vary depending on the size of the gasket. Typically gaskets should be compressed 30% - 60% of the original height.

PRODUCT PERFORMANCE / PHYSICAL PROPERTIES

X-Y-Axis Surface Resistivity (ASTM F390)	< 0.5 ohms / square
Z-Axis Resistivity (APM 130)	< 0.2 ohms / square inch
Shielding Effectiveness (MIL-DTL-83528C Mod)	> 90 dB (200 MHz to 10 GHz)
Service Temperature	-40°F to 158°F (-40°C to 70°C)
Pressure Sensitive Adhesive 180° Peel Strength (ASTM D3330 Mod.)	Conductive: 30 Ounces / Inch Width (Only when PSA is used)

* Results vary depending on part design. Shielding effectiveness must be verified for specific applications. Contact Engineering for assistance.

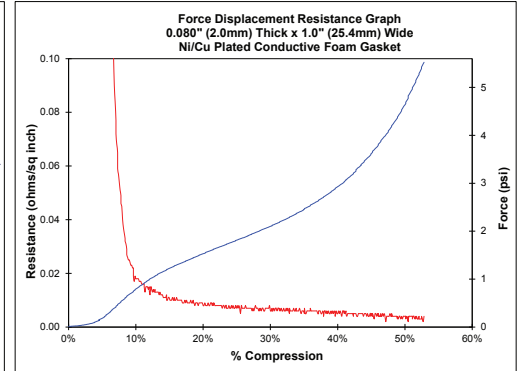
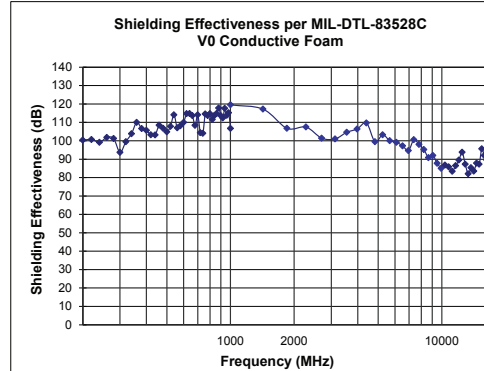
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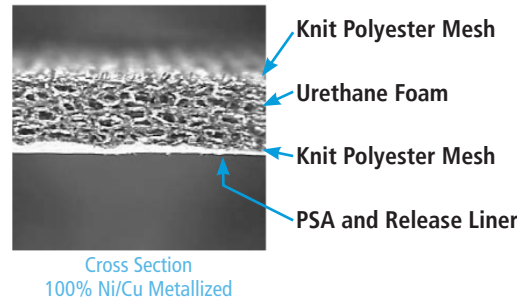


PRESSURE SENSITIVE ADHESIVE

Pressure Sensitive Adhesive	180° Peel Strength on Stainless Steel	Temperature Resistance	Application	Thickness
Conductive	30 oz/inch width	-40°F to 158°F (-40°C to 70°C)	I/O - Backplane Profile Gaskets	2 mils (.051)

Other pressure sensitive adhesives can be provided. Contact Engineering to discuss requirements.

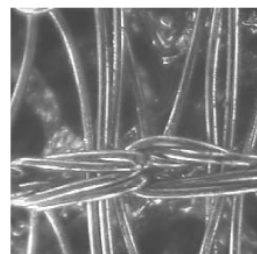
CONDUCTIVE FOAM CONSTRUCTION



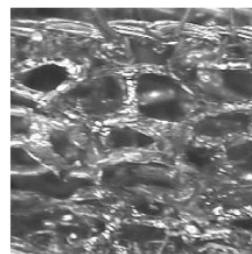
CONDUCTIVE FOAM GASKET TOLERANCES

Profile	Tolerance inches (mm)
Height & Width	± .020 (0.5) For Thicknesses ≤ 3.2 mm
Length inches (mm)	Tolerance inches (mm)
1 to 6 (25.4 – 152.4)	± .030 (0.8)
6 to 11 (152.4 – 279.4)	± .050 (1.3)
11 to 48 (279.4 – 1219.2)	± .100 (2.5)
48 to 70 (1219.2 – 1778.0)	± .187 (4.7)
70 to 96 (1778.0 – 2438.4)	± .250 (6.4)

For others consult with Engineering



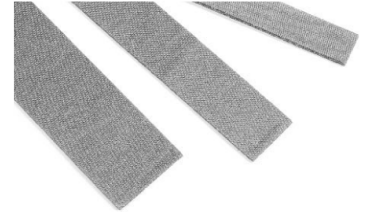
Top and Bottom Surfaces
Ni/Cu Knit Polyester Mesh



Core
Ni/Cu Metallized Urethane Foam

CONDUCTIVE FOAM PROFILE SELECTION GUIDE

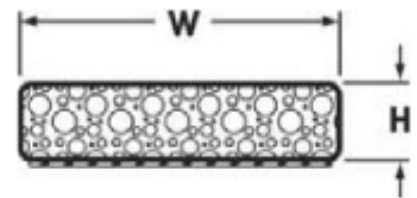
Conductive Foam in a rectangular profile design provides an excellent alternative to standard Fabric-Over-Foam profile gaskets in low shear applications. Supplied in UL94 V0 fire rated material, with or without conductive adhesive, Conductive Foam is a cost-effective solution for many perimeter shielding and grounding applications.



RECTANGLE SHAPED

PROFILE NUMBER	inches (mm) H	inches (mm) W	PROFILE NUMBER	inches (mm) H	inches (mm) W
5286	0.040 (1.0)	1.850 (47.0)	5078	0.060 (1.5)	2.835 (72.0)
5176	0.040 (1.0)	2.580 (65.5)	5092	0.060 (1.5)	3.050 (77.8)
5100	0.040 (1.0)	3.346 (85.0)	5104	0.060 (1.5)	3.400 (86.4)
5997	0.040 (1.0)	4.000 (101.6)	5174	0.060 (1.5)	3.600 (91.4)
5157	0.060 (1.5)	0.480 (12.2)	5015	0.060 (1.5)	4.380 (111.2)
5080	0.125 (3.2)	0.500 (12.7)	5191	0.060 (1.5)	4.000 (101.6)
5023	0.060 (1.5)	1.500 (38.1)	5125	0.125 (3.2)	0.394 (10.0)
5076	0.060 (1.5)	1.625 (41.3)	5064	0.125 (3.2)	1.000 (25.4)
5220	0.060 (1.5)	2.205 (56.0)	5219	0.125 (3.2)	1.500 (38.1)
5214	0.060 (1.5)	2.410 (61.2)	5169	0.125 (3.2)	2.000 (51.0)
5167	0.060 (1.5)	2.540 (64.5)	5221	0.125 (3.2)	2.205 (56.0)
5168	0.060 (1.5)	2.660 (67.6)			

Conductive foam is a perfect material for any size server, router, or switch system. For example, die-cut solutions can be provided at any length by 54" (1370 mm) wide. As with standard I/O gaskets, Laird Technologies can help design a gasket that fits your application.



BACKPLANE PROFILE

PROFILE NUMBER	inches (mm) H	inches (mm) W
5010	0.060 (1.5)	6.000 (152.4)
5241	0.060 (1.5)	5.250 (133.4)
5248	0.060 (1.5)	5.630 (143.0)
5269	0.060 (1.5)	5.880 (149.4)
5264	0.060 (1.5)	7.874 (200.0)
5152	0.060 (1.5)	25.500 (647.7)
5044	0.125 (3.2)	6.157 (156.4)
5151	0.125 (3.2)	6.500 (165.1)
5213	0.125 (3.2)	5.819 (147.8)
5249	0.125 (3.2)	6.490 (164.8)
5268	0.125 (3.2)	6.750 (171.5)
5999	0.125 (3.2)	14.000 (355.6)

Innovative **Technology**
for a **Connected** World

Digits: 1 2 3 4 5 6 7 8 9 10 11 12 13 14
5 2 3 9 - X X - G 1 W - 0 2 6 0 0

Digit 1: Product Type

Designates conductive foam (5).

Digits 2 through 4: Drawing Number for Basic Profile

Designate the part shape and size. In the example shown to the left, the "239" indicates a 0.125" (3.2 mm) high by 1.615" (41.0 mm) wide flat stock gasket. These digits are defined and supplied by Laird Technologies Engineering personnel.

Digits 5 through 6: General Guidelines of Customized Options

Designate part-specific attributes of the product including cutouts, notches, tape width, tape position and a variety of other customized details. These digits are also defined and supplied by Laird Technologies Engineering personnel.

Digit 7: Core Material

Designates the core material Nickel/Copper (Ni/Cu) foam (G).

Digit 8: Flammability Rating

Designates the fire rating: (1) - UL94 V0

Digit 9: Cover Fabric

Designates the outer covering

- W = Ni/Cu Mesh with PSA
- X = Ni/Cu Mesh

Digits 10 through 14: Specific Cut Lengths

Designates the part length in inches to two decimal places. In the example above, the "02600" denotes a 26.00 inch (660.40 mm) long gasket.

CONSTRUCTION OPTIONS

Part Number Suffix (Digits 7,8,9)	Metallized Fabric Type	Core Material	UL94 Fire Rating	General Benefits	Target Application
G1W	Ni/Cu Mesh with PSA	Ni/Cu Foam	UL94 V0	Flame Retardant, Low Compression Set, Adhesive	Profile, I/O, Sheet or Backplane
G1X	Ni/Cu Mesh	Ni/Cu Foam	UL94 V0	Flame Retardant, Low Compression Set	Profile, I/O, Sheet or Backplane

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EMI-DS-CONDUCTIVE-FOAM 0312

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