

## EMI Shield Seal Gasketing (1500 Series)

### Product Summary

Shield Seal Strip is available in various material combinations and sizes. MAJR's versatility of materials and sizes provides assurance of protection against weather conditions including temperature extremes as well as protection against Electro Magnetic Interference and Radio Frequency Interference leakage. The material used conforms to the military specifications. The elastomers (Neoprene or Silicone) are available with or without an adhesive backing.

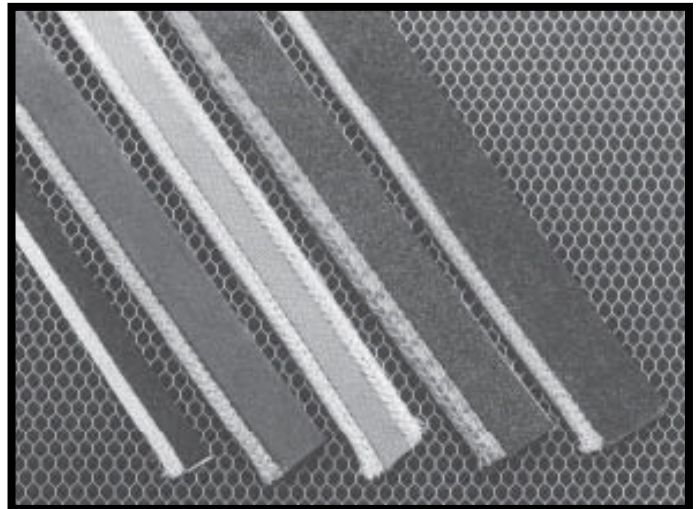
### Product Application

The Shield Seal Strip is used in applications such as electronic cabinets, around the doors, to seal off stray EMI signals. The Shield Seal Strip is also used extensively to shield electronic boxes of various sizes and shapes.

Adhesive backing on the elastomer is often preferred due to the ease of strip mounting. The knit wire mesh is available in various wire materials with Monel and Ferrous materials being the most popular. Double Shield Seal materials are available for added shielding effectiveness.

Consult the attenuation characteristics to determine which material would best suit your requirements.

Shield Seal Strip with adhesive backing is a convenient method of getting the optimum combination of materials for engineering or prototype models. In production it is more convenient and economical to have MAJR manufacture the complete gasket with the necessary mounting holes, compression stops and other special mechanical considerations. Each gasket would be complete and ready for installation thereby increasing reliability and reducing labor costs during assembly of the end product.



### Product Technical Data

Elastomers bonded to knit wire shielding material serve three functions in the final configuration:

1. Moisture Seal
2. Pressure Seal
3. Securing of EMI Shield to Enclosure

# EMI Shield Seal Gasketing (1500 Series) (Cont.)

## EMI/RFI Shielding

The data presented in Table 1 was derived from laboratory tests performed upon EMI gaskets at MAJR. Test samples had an inside dimension of 12.00 x 12.00 inches (304.8 x 304.8 mm).

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
Shielding Effectiveness dB	H	40	60	80	—	—	—	—
	E	—	—	—	110	—	—	—
	PW	—	—	—	—	110	110	110

Field		Material Code -10-12						
		Frequency						
		10 kHz	100 kHz	1 MHz	18 MHz	100 MHz	400 MHz	1 GHz
Shielding Effectiveness dB	H	65	80	95	—	—	—	—
	E	—	—	—	110	—	—	—
	PW	—	—	—	—	110	110	110

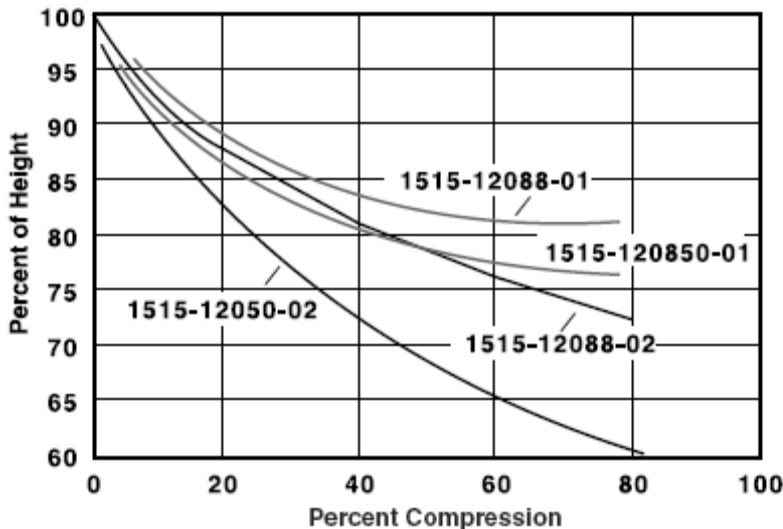
## Features

- High Reliability:**  
 Shield-Seal as provided by MAJR is carefully inspected and periodically tested in our shielded room testing facilities. These tests guarantee the highest possible reliability of materials to our customers.
- High Attenuation:**  
 MAJR's tests show this shielding material as capable of over 110dB of shielding effectiveness in the E-Field and over 70 dB in the H-Field. MAJR provides state-of-the-art shielding effectiveness.
- Wide Choice of Standard Materials:** Standard materials are available to meet extreme temperature conditions (-75° to 260°C) and EMI shielding conditions (beyond 110dB).
- Protection Against Adverse Atmospheric Conditions:** The various elastomer materials as provided by MAJR protect electronic equipment against moisture and dust under severe temperature variations. There is a proper elastomer for almost every condition. Special materials are available through contacting our application engineers.
- Ease of Installation:** MAJR's Shield Seal material is available with an adhesive backing for ease of application. This pre-applied adhesive eliminates any danger of adhesive contamination and greatly reduces installation time.

## Compression Forces

Figure 1 shows comparative data for solid and sponge elastomers indicating pressure required to deflect elastomer from its original height. (For reference only.)

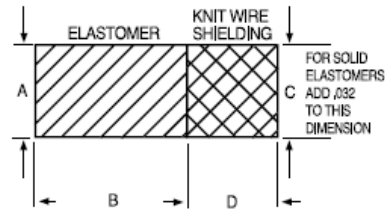
Compression vs Pressure — Figure 1



# EMI Shield Seal Gasketing (1500 Series) (Cont.)

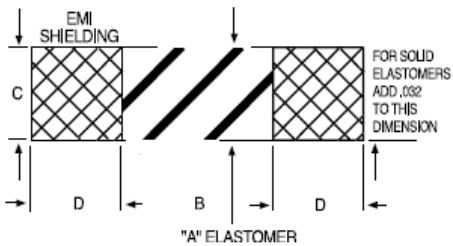


**Table 2**  
**Shield Seal Strips**



DIMENSIONS in inches and (millimeters)				PART NUMBERS			
A	B	C	D	Neo. Sponge & Monel	Silicone Sponge & Monel	Neo. Sponge & Tin Plated Ferrous	Silicone Sponge & Tin Plated Ferrous Wire
.062 (1.57)	.250 (6.35)	.062 (1.57)	.125 (3.18)	1515-06038-02	1515-06038-04	1515-06038-10	1515-06038-12
.062 (1.57)	.375 (9.53)	.062 (1.57)	.125 (3.18)	1515-06050-02	1515-06050-04	1515-06050-10	1515-06050-12
.093 (2.36)	.375 (9.53)	.093 (2.36)	.125 (3.18)	1515-09050-02	1515-09050-04	1515-09050-10	1515-09050-12
.093 (2.36)	.500 (12.70)	.093 (2.36)	.125 (3.18)	1515-09063-02	1515-09063-04	1515-09063-10	1515-09063-12
.125 (3.18)	.125 (3.18)	.125 (3.18)	.125 (3.18)	1515-12025-02	1515-12025-04	1515-12025-10	1515-12025-12
.125 (3.18)	.188 (4.78)	.125 (3.18)	.188 (4.78)	1515-00052-02	1515-00052-04	1515-00052-10	1515-00052-12
.125 (3.18)	.250 (6.35)	.125 (3.18)	.125 (3.18)	1515-12038-02	1515-12038-04	1515-12038-10	1515-12038-12
.125 (3.18)	.250 (6.35)	.125 (3.18)	.250 (6.35)	1515-00053-02	1515-00053-04	1515-00053-10	1515-00053-12
.125 (3.18)	.375 (9.53)	.125 (3.18)	.125 (3.18)	1515-12050-02	1515-12050-04	1515-12050-10	1515-12050-12
.125 (3.18)	.625 (15.88)	.125 (3.18)	.125 (3.18)	1515-12075-02	1515-12075-04	1515-12075-10	1515-12075-12
.188 (4.78)	.188 (4.78)	.188 (4.78)	.125 (3.18)	1515-19019-02	1515-19019-04	1515-19019-10	1515-19019-12
.188 (4.78)	.250 (6.35)	.188 (4.78)	.125 (3.18)	1515-19038-02	1515-19038-04	1515-19038-10	1515-19038-12
.188 (4.78)	.500 (12.70)	.188 (4.78)	.125 (3.18)	1515-19063-02	1515-19063-04	1515-19063-10	1515-19063-12
.250 (6.35)	.250 (6.35)	.250 (6.35)	.125 (3.18)	1515-25038-02	1515-25038-04	1515-25038-10	1515-25038-12
.250 (6.35)	.500 (12.70)	.250 (6.35)	.125 (3.18)	1515-25063-02	1515-25063-04	1515-25063-10	1515-25063-12
.375 (9.53)	.500 (12.70)	.375 (9.53)	.250 (6.35)	1515-38075-02	1515-38075-04	1515-38075-10	1515-38075-12

Note: Aluminum wire is available.  
All part numbers above are for elastomer without adhesive back.  
Change 1515 to 1516 for elastomer with pressure-sensitive adhesive (Neoprene sponge and silicone sponge only).



**Table 3**  
**Double EMI Shield-Seal Strip**

DIMENSIONS in inches and (millimeters)				PART NUMBERS			
A	B	C	D	Neo. Sponge & Monel	Silicone Sponge & Monel	Neo. Sponge & Tin Plated Ferrous	Silicone Sponge & Tin Plated Ferrous Wire
.125 (3.18)	.250 (6.35)	.125 (3.18)	.125 (3.18)	1515-00061-02	1515-00061-04	1515-00061-10	1515-00061-12
.125 (3.18)	.375 (9.53)	.125 (3.18)	.125 (3.18)	1515-00062-02	1515-00062-04	1515-00062-10	1515-00062-12
.125 (3.18)	.500 (12.70)	.125 (3.18)	.125 (3.18)	1515-00063-02	1515-00063-04	1515-00063-10	1515-00063-12
.188 (4.78)	.500 (12.70)	.188 (4.78)	.125 (3.18)	1515-00068-02	1515-00068-04	1515-00068-10	1515-00068-12