

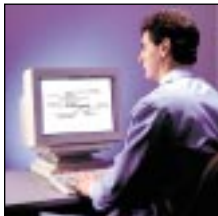


CUSTOM-ENGINEERED SHIELDING PRODUCTS

METEX has been a pioneer in EMI/RFI gasketing and shielding products for more than five decades. In fact, METEX developed the very first EMI/RFI gasket to help MIT solve a severe interference problem for the earliest high-power, high-frequency airborne radar.

That pioneering spirit is still alive today—with a complete line of military and commercial-grade EMI/RFI shielding solutions.

As communications and information technologies expand, the need to provide EMI/RFI solutions becomes more critical than ever before.



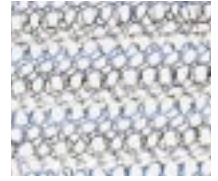
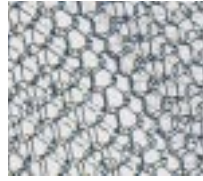
Complete support—
from technical review to
design and application
assistance



World-class EMI/RFI
manufacturing capabilities



TECHNICAL BULLETIN NUMBER 206



O R I E N T E D W I R E

Metex Oriented Wire gasket material is a combination of EMI/RFI and pressure sealing material available in strip, sheet or die-cut form. Wires of Monel or Aluminum, oriented perpendicular to the mating surfaces provide EMI attenuation, and the surrounding matrix of silicone or fluoro-silicone elastomer provides a pressure seal, when it is used in a properly designed enclosure.

Fluoro-silicone should be used in applications that may come in contact with hydrocarbon based liquids, such as petroleum oils or fuels. The combination of a highly resilient and compressible material provide for positive shielding and sealing performance, even under joint mismatch conditions of up to 0.032".

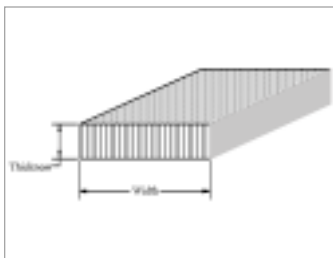
- Gaskets can be easily die cut from sheet stock to conform to complex interfacing geometry.
- PSA adhesive is available on sheet materials to aid installation.
- Standard sheet stock is furnished in widths of 3", 4.5", 6" and 9" by 36" long. Sheet thickness from .020" and up, with tolerances of +/- .005". Custom sizes and configurations are available in molded lengths of up to 18 feet.
- Vulcanized sections can be constructed in sizes to accommodate a wide range of applications. Standard strip part numbers and sizes are shown on the following pages.

Material Characteristics

Temperature Range	-80° to +400°F
Deflection/Compression	3% = 20 psi; 10% = 80 psi
Wire Population	800/square inch
Shielding Effectiveness	25-60 dB@ 2 GHz plane wave
Fluid Seal	Rain, humidity
Solid Silicone	ZZ-R-765 2b 40
Solid Fluoro-Silicone	MII-R-25988 Gr50 blue
Sponge Silicone	AMS 3195
Monel Wire	QQ-N-281 .0045" diameter
Aluminum Wire	Alloy 5056, .005" diameter

This is only a small listing of possible sizes, shapes and combinations. For other sizes and materials, please contact Metex Shielding Sales Engineering at 732-287-0800.





KEY FEATURES

- Provides a low impedance electrical path between mating surfaces
- Individual wires are surrounded by a non-conductive elastomer, reducing exposure to corrosive agents
- Silicone or fluoro-silicone elastomer exhibits very little compression set
- Suitable for pressure up to 100 PSI
- Ideal for extreme temperatures -62° to +232°C

Solid Silicone Sheet Stock Specifications

Thickness"	Width"	Solid Silicone & Monel	Solid Silicone & Aluminum
.032 +.010/- .005	3.0	707-1113-0033-00	707-1123-0033-00
	4.5	707-1113-0034-50	707-1123-0034-50
	6.0	707-1113-0036-00	707-1123-0036-00
	9.0	707-1113-0039-00	707-1123-0039-00
.045 +.010/- .005	3.0	707-1113-0043-00	707-1123-0043-00
	4.5	707-1113-0044-50	707-1123-0044-50
	6.0	707-1113-0046-00	707-1123-0046-00
	9.0	707-1113-0049-00	707-1123-0049-00
.062 ± .010	3.0	707-1113-0063-00	707-1123-0063-00
	4.5	707-1113-0064-50	707-1123-0064-50
	6.0	707-1113-0066-00	707-1123-0066-00
	9.0	707-1113-0069-00	707-1123-0069-00
.093± .010	3.0	707-1113-0093-00	707-1123-0093-00
	4.5	707-1113-0094-50	707-1123-0094-50
	6.0	707-1113-0096-00	707-1123-0096-00
	9.0	707-1113-0099-00	707-1123-0099-00
.125± .010	3.0	707-1113-0123-00	707-1123-0123-00
	4.5	707-1113-0124-50	707-1123-0124-50
	6.0	707-1113-0126-00	707-1123-0126-00
	9.0	707-1113-0129-00	707-1123-0129-00
.187 ± .010	3.0	707-1113-0183-00	707-1123-0183-00
	4.5	707-1113-0184-50	707-1123-0184-50
	6.0	707-1113-0186-00	707-1123-0186-00
	9.0	707-1113-0189-00	707-1123-0189-00
.250 ± .010	3.0	707-1113-0253-00	707-1123-0253-00
	4.5	707-1113-0254-50	707-1123-0254-50
	6.0	707-1113-0256-00	707-1123-0256-00
	9.0	707-1113-0259-00	707-1123-0259-00

Standard length is 36".

For Pressure Sensitive Adhesive (PSA), change the second digit field from 1 to 2.

(Example: 707-1113-XXXX becomes 707-1213-XXXX.)

For Fluoro-Silicone, change the second digit in the second field from 1 to 5.

PSA is not applicable for Fluoro-Silicone.

(Example: Solid Silicone P/N 707-1113-XXXX-XX becomes 707-1513-XXXX-XX for Fluoro-Silicone.)

For additional strip sizes, please contact Metex Shielding Sales Engineering at 732-287-0800.

Sponge Silicone Specifications

Thickness"	Width"	Sponge Silicone & Monel	Sponge Silicone & Aluminum
.062 ± .010	.12	707-1313-0060-12	707-1323-0060-12
	.25	707-1313-0060-25	707-1323-0060-25
	.50	707-1313-0060-50	707-1323-0060-50
	.62	707-1313-0060-62	707-1323-0060-62
	1.00	707-1313-0061-00	707-1323-0061-00
	3.00	707-1313-0063-00	707-1323-0063-00
	4.50	707-1313-0064-50	707-1323-0064-50
.125 ± .010	.12	707-1313-0120-12	707-1323-0120-12
	.25	707-1313-0120-25	707-1323-0120-25
	.50	707-1313-0120-50	707-1323-0120-50
	.62	707-1313-0120-62	707-1323-0120-62
	1.00	707-1313-0121-00	707-1323-0121-00
	3.00	707-1313-0123-00	707-1323-0123-00
	4.50	707-1313-0124-50	707-1323-0124-50
.187 ± .010	.12	707-1313-0180-12	707-1323-0180-12
	.25	707-1313-0180-25	707-1323-0180-25
	.50	707-1313-0180-50	707-1323-0180-50
	.62	707-1313-0180-62	707-1323-0180-62
	1.00	707-1313-0181-00	707-1323-0181-00
	3.00	707-1313-0183-00	707-1323-0183-00
	4.50	707-1313-0184-50	707-1323-0184-50
.250 ± .010	.12	707-1313-0250-12	707-1323-0250-12
	.25	707-1313-0250-25	707-1323-0250-25
	.50	707-1313-0250-50	707-1323-0250-50
	.62	707-1313-0250-62	707-1323-0250-62
	1.00	707-1313-0251-00	707-1323-0251-00
	3.00	707-1313-0253-00	707-1323-0253-00
	4.50	707-1313-0254-50	707-1323-0254-50

For Pressure Sensitive Adhesive (PSA), change the second digit in the second field from 1 to 4.
(Example: 707-1323-XXXX becomes 707-1423-XXXX.)

For additional strip sizes, please contact Metex Shielding Sales Engineering at 732-287-0800.



PRODUCT APPLICATIONS

- **Shielding for Containment—**
 To prevent escape of most or all of the interference generated by a particular device, circuit or system as a disturbing source
- **Shielding for Exclusion—**
 To prevent the intrusion of anticipated or known levels of interference on the performance of a specific device, circuit or system
- **Exclusion/Containment Shielding Plus Pressure Sealing—**
 To provide pressure containment as well as EMI/RFI attenuation
- **Grounding and Contacting—**
 Not to contain or exclude but to conduct electrical current such as discharging electrostatic energy from imperfectly grounded structures to ground, providing a dependable, low impedance connection between removable circuit assemblies and the host circuit ground plane and/or power busses, thus ensuring good contact between large or massive electrical structures that do not mate mechanically due to dimensional tolerance

In all of these applications, the solution is found in the use of highly resilient, high-conductive shielding materials.



Metex Electronic Shielding Products

The diversity and versatility of our product line enables Metex to offer a wide range of custom solutions to optimize shielding effectiveness. We provide both off-the-shelf and custom designs in commercial and military-grade materials to ensure EMC integrity and quality. From prototype to volume production, our product line includes:

- Knitted Wire Mesh
- Vent Panels/Mesh Screens
- Spring Fingers
- Conductive Fabric
- Oriented Wire
- Braided Sleeving
- Shielded Windows, Instrumentation and Rooms
- Conductive Silicone Adhesive
- Shielding Tape/Foil Laminates
- Fabric Over Foam Gaskets
- Connector Gaskets
- Braided Rope
- Wire Mesh Gaskets

Our **Oriented Wire Gasket Material** continues a long-standing Metex tradition of integrating the right designs, materials and production methods to meet customer needs for optimal performance at the lowest possible cost.



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