# Expanded Metal/Screen Cloth Elastomer Combinations series 900

## DESCRIPTION:

A composite of metal sheeting impregnated with an elastomer to yield a highly conductive, yet resilient Gasketing material for EMI/RFI shielding as well as a pressure and environmental seal. Ja-Bar's unique fabrication process allows for unmatched consistency in quality and performance.

Available without elastomer filler for use in applications where an environmental seal is not necessary, or for use in applications as a low performance RF air filter.

## APPLICATION:

Designed for those specific applications where joint unevenness does not exceed .004 inches and/or where space restrictions occur. Conductivity is achieved on contact due to the protruding contact points , which lends to its use in nearly all types flat connectors.

## SPECIFICATIONS:

Listed below are the most commonly used mesh and elastomer types. Others are available upon request.

## AVAILABILITY:

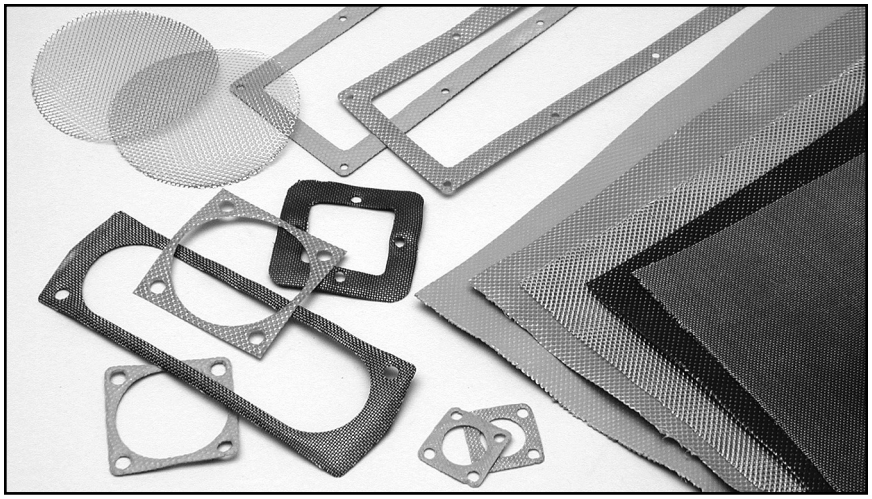
Due to the various combinations available from Ja-Bar we have devised a part number system for the most commonly used materials. As you can see, the first three digits determine the type of metal and the type of filler required. The next four digits establish the end products dimensional characteristics.

The first of these four, determine whether the part is of a standard configuration, or a custom design. If a "1" appears, the part is custom designed by you, the customer, and the next three digits will be assigned from our numerical listing of custom parts.

If the part has been determined to be "standard", the next digit will determine the applicable product family.

| | |
|---|---|
| 9XX-0XXX | Standard |
| 9XX-1XXX | Custom |

| | |
|---|---|
| 9XX-01XX | Sheeting |
| 9XX-02XX | Connector Gaskets |



## AVAILABLE METALS:

| Part No. | Metal | Specification |
|---|---|---|
| 9X1- | Expanded Monel | QQ-N-281B |
| 9X2- | Expanded Aluminum | QQ-A-250 |
| 9X3- | Expanded Copper | N/A |
| 9X4- | Expanded Nickel | N/A |
| 9X5- | Expanded Stainless Steel | Alloy 302 |
| 9X6- | Woven Aluminum Screen Cloth | AMS 4182 |

## AVAILABLE ELASTOMERS:

| Part No. | Elastomer | Specification |
|---|---|---|
| 90X- | None | N/A |
| 91X- | Silicone | ZZ-R-765 CL2 GR50 |
| 92X- | Silicone | AMS 3302D |
| 93X- | Synthetic | AMS 3222C |
| 94X- | Fluorosilicone | MIL-R-25988 |
| 95X- | Low Out Gassing Silicone | ASTM E595-84 |

## SHIELDING PERFORMANCE CHARACTERISTICS:

| | 901 | 902 | 903 | 926 / 936 |
|---|---|---|---|---|
| Shielding db: 200 KHz | 60 | 60 | 70 | 65 |
| Shielding db: 100 MHz | 90 | 90 | 100 | 90 |
| Shielding db: 1.0 GHz | 70 | 70 | 85 | 75 |
| EMP: Survivability | yes | yes | yes | yes |
| Closing Force: (PSI) | 50-75 | 50-75 | 50-75 | 50-75 |
| Compression Set @ 50 PSI | 1% | 1% | 1% | 1% |

## STANDARD SHEETING: 50 FOOT ROLLS

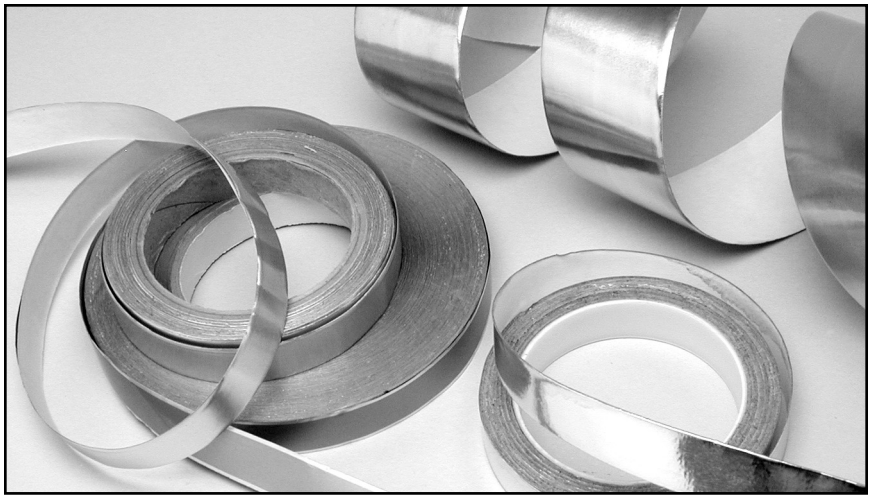
| Part No. | Thickness (+/- .004") | Width (minimum) |
|---|---|---|
| 0101 | .016 | 8.0 |
| 0102 | .016 | 10.0 |
| 0103 | .016 | 12.0 |
| 0104 | .020 | 8.0 |
| 0105 | .020 | 10.0 |
| 0106 | .020 | 12.0 |
| 0107 | .030 | 8.0 |
| 0108 | .030 | 10.0 |
| 0109 | .030 | 12.0 |
| 0110 | .010 | 12.0 |

# Conductive Foil Shielding Tape series 908/909

## DESCRIPTION:

Our Aluminum and Copper Foil Conductive Tapes with conductive particle filled adhesive, provide excellent electrical bonding and high levels of shielding in new applications with insufficient room for conventional gasketing materials, and in repairs of old applications unable to meet today's rigorous shielding demands.

Rolls are available both in standard slit widths, and custom slit and kiss cut to customer supplied specifications.



## TYPICAL USES OF CONDUCTIVE FOIL SHIELDING TAPE:

- Electrical bonding of seams
- ESD Grounding
- Shielding Wrap of Flex Cable
- Post production repairs

| Properties | Copper | Tin Plated Copper | Aluminum |
|---|---|---|---|
| Part Number | 908 | 918 | 909 |
| Thickness | .002" | .0015" | .003" |
| Electrical Resistance | < .010 Ohms/in2 | < .003 Ohms/in2 | < .010 Ohms/in2 |
| Adhesive | Conductive Acrylic | Conductive Acrylic | Conductive Acrylic |
| Shielding Effectiveness 10 MHz-1GHz | > 60 dB | > 60 dB | >55 dB |
| Adhesion to steel (lbs/in.) | 2.75 | 2.75 | 2.75 |
| Adhesion to aluminum (lbs/in.) | 3.12 | 3.12 | 3.12 |

The standard available widths and their corresponding part number designators are as follows:

| Part No. | Width |
|---|---|
| -0301 | 0.500" |
| -0302 | 0.750" |
| -0303 | 1.0" |
| -0304 | 1.5" |
| -0305 | 2.0" |
| -0306 | 4.0" |

The full part number for 0.500" Aluminum Foil Shielding Tape is 909-0301. Custom die cut and continuous "kiss" cut configurations available upon request. Change the 4th digit from a "0" to a "1", to indicate non-conductive PSA.

# Silicone Filled Knitted Wire Series 900

Ja-Bar has developed a specialized product, that incorporates the flexibility of Knitted Monel Wire Mesh, with the environmental sealing capability if silicone filled woven wire mesh, called Silicone Filled Knitted Monel Wire Mesh. This materials' flexibility lends it to be ideal for applications which require conforming properties around corners and edges. The silicone filler both supports the knitted monel mesh, and allows the material to create an environmental seal as both a cover and a compression seal. Electrical conductivity is maintained on one surface for ease of grounding. Physical and Electrical characteristics are as follows:

| Materials | Property |
|---|---|
| Monel Wire Mesh Sleeve | .0045 wire diameter |
| | 10 – 15 openings / inch |
| | Double Layer mesh |
| | QQ-N-281b |
| Solid Silicone | ZZ-R-765 Cl II |
| | 50 Duro Shore A |
| Composite Thickness | 0.018" +/-.005" |
| Shielding Performance | Effectiveness |
| 1 MHz | 35 db |
| 10 MHz | 70 db |
| 100 MHz | 85 db |
| 400 MHz | 85 db |
| 1 GHz | 35 db |
| 10 GHz | 25 db |

Our Knitted woven mesh is readily available in 8.0 inch widths, and in 12.0 inch widths with longer lead times. Modifications to thickness can be made with slight penalties in flexibility. (Thickening material without adding layers of mesh will eliminate the exposed electrically conductive surface on the one side.)

# Silicone Filled Knitted/Woven Wire Mesh Combination Series 900

Ja-Bar has developed a specialized product, that incorporates the combination of Knitted Monel Wire Mesh, 100 OPI Woven Stainless Steel wire screen, and the environmental sealing capability of silicone. This materials' flexibility lends it to be ideal for applications which require conforming properties around corners and edges. The silicone filler both supports the mesh combination, and allows the material to create an environmental seal as both a cover and a compression seal. Electrical conductivity is maintained on one surface for ease of grounding. Physical and Electrical characteristics are as follows:

| Materials | Property |
|---|---|
| Monel Wire Mesh Sleeve | .0045 wire diameter |
| | 10 – 15 openings / inch |
| | QQ-N-281b |
| | Double Layer mesh |
| Woven Stainless Steel Mesh | .0015 wire diameter |
| | 100 openings / inch |
| Solid Silicone | ZZ-R-765 Cl II |
| | 50 Duro Shore A |
| Composite Thickness | 0.030" +/-.005" |
| Shielding Performance | Effectiveness |
| 1 MHz | 70 dB |
| 10 MHz | 85 dB |
| 100 MHz | 100 dB |
| 400 MHz | 100 dB |
| 1 GHz | 65 dB |
| 10 GHz | 60 dB |

Our Mesh combo is readily available in 8.0 inch widths, and in 12.0 inch widths with longer lead times. Modifications to thickness can be made with slight penalties to flexibility.