EMI/RFI Shielding Product Guide

- Finger Stock
- Knitted Wire Mesh
- Connector Gaskets
- Metalized Fabric
- Honeycomb Vents
- Conductive Elastomers
- Conductive Foam
- Die Cut Gaskets

Tech-Etch, Inc., 45 Aldrin Road, Plymouth, MA 02360 • TEL 508-747-0300 • FAX 508-746-9639
Beryllium copper finger stock provides maximum spring properties for strength and fatigue resistance and good conductivity. It is available in a variety of finishes and mounting styles including Clip-on, Stick-on, Snap-on, Hook-on, Track and Special Mounting.

Many shielding strips are available in 25-foot continuous coils, such as the Strip Gasket pictured here.

"D" connector Gaskets, available in five standard sizes, are offered in both stainless steel and beryllium copper.

Die cut gaskets are available in Weaveshield, Monoshield, Multishield, Supershield, Fabric Over Foam, and Conductive Foam.

Many shielding strips are available in 25-foot continuous coils, such as the Strip Gasket pictured here.

Easy to apply Symmetrical finger stock with snap-on mounting made from beryllium copper.
Shielded Honeycomb Vents provide high shielding efficiency with a low resistance to air flow. 8000, 8200 and 8300 Series.

Shielded Filters combine the functions of RFI shielding and ventilation with efficient dust filtering. 8500 and 8900 Series.

Knitted wire mesh EMI/RFI strips are available in round, round with tail, rectangular and double round with tail. Available with pressure sensitive mounting and with (bottom right) or without environmental seal. 2000 and 3000 Series.

Highly conductive metalized fabric over foam shielding is available in rectangular, "D", flat, domed, C-fold, knife edge, and square configurations. 2400 and 2600 Series.
## SYMMETRICAL SNAP-ON/TRACK MOUNT

### OMNI CONTACTS
- SNAP-ON MOUNTING. Into slots or onto special mounting track designed for easy mechanical installation. Tracks available with double sided pressure sensitive transfer tape.
- STICK-ON MOUNTING. Double sided pressure sensitive transfer tape. SPECIAL MOUNTING. Riveting.

### SYMMETRICAL VARIABLE GASKETS
- SNAP-ON MOUNTING. Into 2 slots (SLOT MOUNT) or 1 slot and 1 edge (EDGE MOUNT) designed for easy mechanical installation. Tracks available with double sided pressure sensitive transfer tape.

### ALTERNATE SLOT GASKETS
- SNAP-ON MOUNTING. Into slots or onto special mounting track designed for easy mechanical installation.
- STICK-ON MOUNTING. Double sided pressure sensitive transfer tape. CLIP-ON MOUNTING. Flange .03 to .06 in. HOOK-ON MOUNTING. Flange thk. up to .06 in.

### LOW PROFILE GASKETS
- SNAP-ON MOUNTING. Into slots or onto special mounting track designed for easy mechanical installation.

### SOFT FINGERS
- SNAP-ON MOUNTING. Into slots or onto special mounting track designed for easy mechanical installation. Tracks available with double sided pressure sensitive transfer tape.
- STICK-ON MOUNTING. Double sided pressure sensitive transfer tape. CLIP-ON MOUNTING. Flange thickness .06 inches.

### Composition
- Teryllium Copper (CA 172) Heat Treated. Finishes include Clean & Bright, Gold, Silver, Tin Lead, Bright Tin, Nickel, Zinc/Clear Chromate, & Electroless Nickel.

### Size Range
- Uncompressed heights .075 to .32 inches for gaps of .03 to .26.
- Uncompressed heights .13 to .32 inches for gaps of .06 to .26.
- Uncompressed heights .11 to .22 inches for gaps of .04 to .15.
- Uncompressed heights .10 to .11 inches for gaps of .04 to .09.
- Uncompressed heights .06 to .15 inches for gaps of .02 to .12.
- Uncompressed heights .08 to .40 inches for gaps of .03 to .32.

### Compression
- Effective compression range of 20% to 70% of uncompressed height. Anti-snag feature.
- Effective compression range of 20% to 50% of uncompressed height.
- Effective compression range of 20% to 70% of uncompressed height. Anti-snag feature.
- Effective compression range of 20% to 70% of uncompressed height. Anti-snag feature.
- Effective compression range of 20% to 70% of uncompressed height. Anti-snag feature.

### RF Seal
- Continuous sliding contact surface from individual fingers. Bidirectional.
- Point contact per finger. Bidirectional.
- Continuous sliding contact surface from individual fingers. Bidirectional.
- Continuous sliding contact surface from individual fingers. Bidirectional.
- Continuous sliding contact surface from individual fingers. Bidirectional.

### Standard Products
- 250KS37, 250KS60, 375KS80.
- 187V32FXx, 187VE32FXx, 250V37FXx, 250VE37FXx, 282V60FXx.
- 93AS32, 187AS32.
- 125L54, 125LP45, 125L60, 125LP45H60, 125L60H60, 250C040, 125LP55C070, 125LP75C070, 125G32, 125LP55, 125LP55H060, 125LP55H120, 125LP55H240, 125LP55H360, 125LPS45, 125LPS45H060.
- 187P32, 187P37, 250P37, 250P37E50, 375P60, 375P80, 500P110, 187W35, 375P64C070, 125M32, 125M32, 125M60, 250M42C040/50/60/70, 375M60E78, 60P21.

---


To obtain application assistance or samples, contact Tech-Etch or our sales representative in your area.
### TWISTED CONTACTS
- CLIP-ON MOUNTING. Flange thickness .03, .04, .05, .06, .07, .09, and .125 inches.
- TWISTED CONTACTS
- CLIP-ON MOUNTING. Flange thickness .06 in.
- Beryllium Copper (CA 172) Heat Treated. Finishes include Clean & Bright, Gold, Silver, Tin Lead, Bright Tin, Nickel, Zinc/Clear Chromate, & Electroless Nickel.

### CLIP-ON GASKETS
- SPECIAL MOUNTING. Riveting, spot welding or soldering.
- CLIP-ON MOUNTING. Flange thickness .06 and .07 inches.

### CYLINDRICAL RADIUS GASKETS
- CLIP-ON MOUNTING. Flange thickness .03, .04, .05, .06, .07, .09, and .125 inches.
- SPECIAL MOUNTING. Riveting, spot welding or soldering.

### REVERSE BEND GASKETS
- CLIP-ON MOUNTING. Flange thickness .06 and .07 inches.

### SPHERICAL RADIUS GASKETS
- CLIP-ON MOUNTING. Flange thickness .09 and .12 inches.

### STRIP GASKETS
- CLIP-ON MOUNTING. Flange thickness .09 and .12 inches.

### Mounting
- STICK-ON MOUNTING.
  - Double sided pressure sensitive transfer tape.
  - CLIP-ON MOUNTING.
  - Flange thickness .06 in.
- SPECIAL MOUNTING.
  - Riveting, spot welding or soldering.
  - CLIP-ON MOUNTING.
  - Flange thickness .03, .04, .05, .06, .07, .09, and .125 inches.

### Composition
- Also available: Extended Liner PSA, Stainless Steel.
- Also available: Conductive PSA, Contact Rings.
- Also available: Conductive PSA, Contact Rings.

### Size Range
- Effective compression range of 20% to 80% of uncompressed height.
- Effective compression range of 20% to 75% of uncompressed height.
- Effective compression range of 20% to 75% of uncompressed height.
- Effective compression range of 20% to 75% of uncompressed height.
- Effective compression range of 20% to 75% of uncompressed height.

### Compression
- Effective compression range of 20% to 75% of uncompressed height.
- Effective compression range of 20% to 75% of uncompressed height.
- Effective compression range of 20% to 75% of uncompressed height.
- Effective compression range of 20% to 75% of uncompressed height.
- Effective compression range of 20% to 75% of uncompressed height.

### RF Seal
- Continuous sliding contact surface from individual fingers.

### Standard Products
- 95A, 95T, 95T90, 165T, 165T90°, 165T2, 250T, 500T, 165TC070, 165TC060/70M, 95TC040/50/70, 95TC060/70M, 165TW.300.

### Interactive PDF Print Available
- Visit www.tech-etch.com/shield to create an interactive print.

Consult Tech-Etch or our website www.tech-etch.com/shield for more detailed product information and sales representative listing.
### CONNECTOR GASKETS
- **Gasket mounting.**

### METALIZED FABRIC OVER FOAM CORE GASKETS
- Surface mounted using pressure-sensitive self-adhesive.

### CONDUCTIVE FOAM GASKETS
- As a flat, rule die cut, gasket available with or without pressure-sensitive conductive adhesive on one side.

### SUPERSHIELD
- Flat gasket die cut from sheet form. Picture frame fabricated from strip. Molded gasket to drawing, extruded section as required.

### MULTISHIELD
- Surface mount bonded using RTV 3195 (or equivalent) or with pressure-sensitive adhesive. Requires relatively high closure pressure.

### MONOSHIELD
- As a flat, rule die cut, gasket spot bonded in place using a non-conductive silicone to metal adhesive.

---

**D Connector, AN Connector and Waveguide Gaskets are offered from the above materials.**

### Composition
- **Available in Beryllium Copper or Stainless Steel. Standard Tech-Etch finishes available.**
- Metalized nylon fabric over open-celled polyurethane foam core.
- Conductive open cell polyurethane foam with a nickel over copper plated polyester fabric on either side.
- Silver-plated inert particles in silicone rubber forming a homogeneous elastomer compound.
- Oriented monel or aluminum wires in solid or sponge silicone.

### Size/Type
- Range of Rectangular, Square, D, C-Fold, Knife Edge, Flat, and Domed Shape.
- Die cut to customer drawing and supplied in finished gasket form. Alternatively in a range of sheet form or strip form in various thicknesses and widths.
- Sheet form and strip form molded to customer drawing and supplied in finished gasket form. Alternatively can be die cut to customer drawing and supplied in finished gasket form.
- Range of sheet form or strip form in various thicknesses and widths. Alternatively can be die cut to customer drawing and supplied in finished gasket form. Available by the foot length in widths up to 12 inches. Thicknesses are .030 and .020. Alternatively can be die cut and supplied in finished gasket form.

### Enviro Seal
- Does not provide environmental seal.
- Under some circumstances, can provide a dust shield, but generally does not provide environmental seal.
- Under some circumstances, can provide a dust shield, but generally does not provide environmental seal.
- Pressure and moisture seal.
- Fluid and pressure seal.
- Waterproof and, with some care, can provide a pressure seal.

### RF Seal
- Continuous contact from individual fingers.
- Nickel plating over a highly conductive copper-plated substrate.
- Nickel over copper plated polyester fabric on both sides of X, Y, & Z axis conductive foam.
- Via conductive particles in silicone rubber.
- Multi-point contact provides 600 to 900 contact points per sq. inch. Twisted matrix of wires aligned perpendicular to contact force.
- The exposed edges of the expanded metal provide 225 contact points per square inch, thus ensuring a good electrical contact.

### Mechanical Specs
- **Standard Products:**
  - 9D10/12/20/22, 15D10/12/20/22, 25D10/12/20/22, 37D10/12/20/22, 50D10/12/20/22.
- **2400 Series**
  - Temperature range -40°C to +70°C. Profile tolerances ± .020 on all dimensions.
  - UL 94 V-Rated.
  - 2400 Series
  - 2600 Series
- **2700 Series**
  - Temperature range -40°C to +70°C. Compression deflection 2-3 psi @ 50% compression.
  - UL 94 V-Rated.
- **1000 Series**
  - Temperature range -60°C to +200°C. Compression limitation of solid silicone rubber.
  - 1000 Series
  - Temperature range -60°C to +260°C. Elastomer shore hardness silicone 40.
  - 4000 Series
  - Temperature range -60°C to +260°C. Tolerance thickness ±.004. Tolerances on rule die cut finished gasket: Width up to 12 ± .030; Hole centers ± .015.
  - 5000 Series

---

To obtain application assistance or samples, contact Tech-Etch or our sales representative in your area.
<table>
<thead>
<tr>
<th>WEAVESHIELD</th>
<th>KNITTED WIRE MESH WITH ELASTOMER OR WIRE CORE</th>
<th>SILVERSHEILD ELASTOMER CORE STRIPS</th>
<th>TWINSEAL</th>
<th>SHIELDED ALUMINUM HONEYCOMB VENTS</th>
<th>ELECTRONIC FILTER AND DUST SHIELDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a flat, rule die cut, gasket whether loose fitting or spot bonded in place using a non-conductive adhesive compatible with elastomer. Cut gaskets available.</td>
<td>Fitted into a channel or surface mounted using pressure-sensitive self-adhesive.</td>
<td>Fitted into a channel or surface mounted using pressure-sensitive self-adhesive.</td>
<td>Available with optional pressure-sensitive adhesive (PSA) or special mounting per requirements.</td>
<td>According to frame style used, are available for surface mounting or for near-flush mounting within an enclosure wall or panel. Standard Fan Vent available with or without dust filter.</td>
<td>For combined dust and RF seal applications. Ideal for mechanically demanding application.</td>
</tr>
<tr>
<td>A woven mesh of aluminum wire impregnated with either silicone or neoprene elastomer.</td>
<td>One or more layers of monel, aluminum, tin-plated copper-clad steel (T.C.S.), or stainless steel knitted wire mesh with or without solid or hollow elastomer core.</td>
<td>Knitted silver plated nylon thread with a strand of monel wire over solid or hollow elastomer core.</td>
<td>Knitted wire mesh of tin-plated copper-clad steel (T.C.S.), monel, aluminum or stainless steel bonded to a sponge or solid elastomer (silicone or neoprene).</td>
<td>Aluminum honeycomb assembled in frame and pre-drilled or fitted with captive fasteners for mounting onto an enclosure. A conductive gasket provides electrical continuity.</td>
<td>Composite dust and RF filter in aluminum frame.</td>
</tr>
<tr>
<td>Moisture seal.</td>
<td>Under some circumstances, can provide a dust shield, but generally does not provide environmental seal.</td>
<td>Under some circumstances, can provide a dust shield, but generally does not provide environmental seal.</td>
<td>Splash and weather seal via neoprene or silicone. Pressure seal from silicone rubber.</td>
<td>Does not provide an environmental seal, but versions available with one sheet of honeycomb slanted to 45° or 60° to deflect rain.</td>
<td>Dust seal only. Via corrugations of aluminum mesh in aluminum frame and gasket. Gasket screen is of mesh type.</td>
</tr>
<tr>
<td>Electrical contact via the exposed surfaces of the woven mesh.</td>
<td>Continuous surface of super-imposed knitted wire mesh.</td>
<td>Continuous surface of super-imposed knitted wire mesh.</td>
<td>Knitted wire mesh strips provide a continuous surface of super-imposed wires.</td>
<td>RF seal via single or multiple layers of honeycomb oriented for optimum shielding.</td>
<td>RF seal via corrugated layers of woven mesh.</td>
</tr>
<tr>
<td>Temperature range -54°C to +260°C. Tolerance thickness ± .004. Tolerances on rule die cut finished gasket: Width up to 12 ± .030; Hole centers ± .015. 5500 Series</td>
<td>Temperature range with neoprene core -54° to +100°C, with silicone core -60° to +260°C. If all wire limited only by softening point of metal. Tolerances ± .030 on all dimensions. Closer tolerances by special order. 2000 Series</td>
<td>Temperature range with neoprene core -54° to +100°C, with silicone core -60° to +260°C. Tolerances ± .030 on all dimensions. Closer tolerances by special order. 2200 Series</td>
<td>Depends on elastomer used in construction. Silicone -60°C to +260°C. Neoprene -54°C to +100°C. Tolerances - Linear: Sponge ± .030, Solid ± .015, Hole fixings ± .015. 3000 Series</td>
<td>If silicone gasket, -60°C to +260°C. If neoprene gasket, -31°C to +107°C. With dust filter, fitted tolerances on overall dimensions ± .030. On hole and fastener locations ± .015. 8000 Series 8200 Series 8300 Series</td>
<td>Temperature limited only by softening point of metals used. 8500 Series 8900 Series</td>
</tr>
</tbody>
</table>

Consult Tech-Etch or our web site www.tech-etch.com/shield for more detailed product information and sales representative listing.
The data presented in this brochure is based on testing and to our knowledge is accurate and true. Since applications, test measures, and test procedures may vary, we recommend that users of our products perform their own tests to assure the suitability of these products for their specific applications.

Full technical information for all of the products listed in this brochure can be found in our 52-page EMI/RFI Shielding Solutions catalog pictured below. It is offered in both printed and interactive PDF versions at www.tech-etch.com/shield.

To contact our application engineers call: 508-747-0300 or FAX 508-746-9639.

Interactive EMI/RFI Shielding Product Catalog

BeCu Contact Rings

The contact rings shown here are fabricated from finger stock. These rings can be formed in any diameter containing an integral number of fingers, down to the minimum diameter to which that particular strip can be curled.

Available In High Volume

- Wide range of in-house plating options
- Excellent durability
- Superior attenuation
- Offered for both inside or outside plug applications
- Ideal for microwave cavities, tuning, shielding and grounding applications
- Visit web site to see available profiles

Standard and Custom Board Level Shielding

Standard and custom designs are manufactured using a photo chemical etching process making it possible to offer custom single piece and standard two-piece designs with no tooling charges. For more information please visit www.tech-etch.com or contact one of our application engineers at 508-747-0300.

EMI Shielding Free Sample Program

- Finger Stock Shielding Samples
  Tech-Etch has the most extensive free sample program in the industry. To request samples of our finger stock shielding, visit www.tech-etch.com/shieldlit.html

- Honeycomb Vent Prototypes
  Tech-Etch offers free prototypes of honeycomb vents in advance of production to qualified programs. To request one visit www.tech-etch.com/shield/ventsample.html

Manufacturing Facilities - Made in USA
Tech-Etch plants located in Plymouth and Fall River, Massachusetts have over 200,000 square feet of manufacturing space providing complete facilities for the production and finishing of EMI/RFI Shielding products.

The data presented in this brochure is based on testing and to our knowledge is accurate and true. Since applications, test measures, and test procedures may vary, we recommend that users of our products perform their own tests to assure the suitability of these products for their specific applications.