



EMI/RFI
SHIELDING
PRODUCT
GUIDE





| 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.

| "D" CONNECTOR GASKETS |

Available in five standard sizes, are offered in both stainless steel and beryllium copper.



| SHIELDING STRIPS |

are available in 25-foot continuous coils, such as the Strip Gasket. *Pictured here.*



| DIE CUT GASKETS |

Are available in Weaveshield, Monoshield, Multishield, Supershield, Fabric Over Foam, and Conductive Foam.



| SYMMETRICAL FINGER STOCK |

with snap-on mounting made from beryllium copper.





| SHIELDED FILTERS |

Combine the functions of RFI shielding and ventilation with efficient dust filtering. *8500 and 8900 Series.*

| SHIELDED HONEYCOMB VENTS |







Provide high shielding efficiency with a low resistance to air flow. *8000, 8200 and 8300 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 |





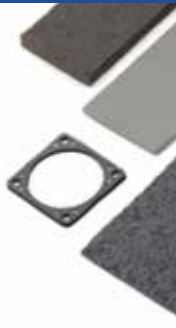

is available in rectangular, "D", flat, domed, C-fold, knife edge, and square configurations. *2400 and 2600 Series.*

	SYMMETRICAL SNAP-ON/ TRACK MOUNT	OMNI CONTACTS	SYMMETRICAL VARIABLE GASKETS	ALTERNATE SLOT GASKETS	LOW PROFILE GASKETS	SOFT FINGERS
						
Mounting	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.	SNAP-ON MOUNTING. Into 2 slots (SLOT MOUNT) or 1 slot and 1 edge (EDGE MOUNT) designed for easy mechanical installation.	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 .03 to .06 in. HOOK-ON MOUNTING. Flange thk. up to .06 in.	STICK-ON MOUNTING. Double sided pressure sensitive transfer tape. CLIP-ON MOUNTING. Flange thickness .06 inches.
Composition	Track is stainless steel, brass, or nickel silver. Finger stock also available: DiamondBack (dB), Slotless.	Brass Mounting Pad. Also available: DiamondBack (dB).	Also available: DiamondBack (dB).	Also available: DiamondBack (dB).	Also available: DiamondBack (dB), Extended Liner PSA, Slotless, Stainless Steel.	Also available: DiamondBack (dB), Extended Liner PSA, Slotless, Stainless Steel.
	Beryllium Copper (CA 172) Heat Treated. Finishes include Clean & Bright, Gold, Silver, Tin Lead, Bright Tin, Nickel, Zinc/Clear Chromate, & Electroless Nickel. Available in multiple thicknesses (compression). Lowest compression version is typically identified by a "TF" prefix on standard products with multiple options.					
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.
	Strip lengths as required. Application-specific cut-to-lengths available for all parts. Certain items available in rolls. Consult TechEtch to determine ideal length.					
Compression	Effective compression range of 20% to 70% of uncompressed height. Anti-snap feature.	Effective compression range of 20% to 50% of uncompressed height.	Effective compression range of 20% to 70% of uncompressed height. Anti-snap feature.	Effective compression range of 20% to 70% of uncompressed height. Anti-snap feature.	Effective compression range of 20% to 70% of uncompressed height. Anti-snap feature.	Effective compression range of 20% to 70% of uncompressed height. Anti-snap 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.	Continuous sliding contact surface from individual fingers. Bidirectional.
Standard Products	93S32, 157S20, 187S30, 187S32, 206W36, 219S60, 250S37, 250S60, 375S60, 375S80, TR32, TR37X, TR37RX, TR60X, TR60RX, TR80X, TR80RX.	250KS37, 250KS60, 375KS80.	187V32FXx, 187VE32FXx, 250V37FXx, 250VE37FXx, 282V60FXx.	93AS32, 187AS32.	125G28, 125LP45, 125LP60, 125LP45H060, 125LP60H060, 250C040, 125LP55C070, 125LP75C070, 125G32, 125LP55, 125LP55H060, 125LPS45, 125LPS45H060.	187P21, 187P28, 187P32, 250P37, 250P37E50, 375P60, 375P80, 500P110, 187W35, 375P64C070, 156M32, 250M37, 375M60, 250M42C040/50/60/70, 375M60E78, 60P21.
	Interactive PDF Print Available. Visit www.techetch.com/shield to create an interactive print. To obtain application assistance or samples, contact TechEtch or our sales representative in your area.					





	TWISTED CONTACTS	CLIP-ON GASKETS	CYLINDRICAL RADIUS GASKETS	REVERSE BEND GASKETS	SPHERICAL RADIUS GASKETS	STRIP GASKETS
						
Mounting	STICK-ON MOUNTING. Double sided pressure sensitive transfer tape. CLIP-ON MOUNTING. Flange thickness .06 in.	CLIP-ON MOUNTING. Flange thickness .03, .04, .05, .06, .07, .09, and .125 inches.	SPECIAL MOUNTING. Riveting, spot welding or soldering. CLIP-ON MOUNTING. Flange thickness .03, .04, .05, .06, inches.	CLIP-ON MOUNTING. Flange thickness .06 and .07 inches. SPECIAL MOUNTING. Riveting, spot welding or soldering.	SPECIAL MOUNTING. Riveting, spot welding or soldering.	CLIP-ON MOUNTING. Flange thickness .09 and .12 inches. SPECIAL MOUNTING. Riveting, spot welding or soldering.
Composition	Also available: Extended Liner PSA, Stainless Steel.	Also available: Stainless Steel.	Also available: Conductive PSA, Contact Rings.	Also available: Conductive PSA, Contact Rings.	Also available: Conductive PSA, Contact Rings.	Also available: With rounded corners.
	Beryllium Copper (CA 172) Heat Treated. Finishes include Clean & Bright, Gold, Silver, Tin Lead, Bright Tin, Nickel, Zinc/Clear Chromate, & Electroless Nickel Available in multiple thicknesses (compression). Lowest compression version is typically identified by a "TF" prefix on standard products with multiple options.					
Size Range	Uncompressed heights .03 to .21 inches for gaps of .01 to .17.	Uncompressed heights .06 to .26 inches for gaps of .02 to .21.	Uncompressed heights .06 to .22 inches for gaps of .02 to .18.	Uncompressed heights .06 to .44 inches for gaps of .03 to .35.	Uncompressed heights .04 to .12 inches for gaps of .01 to .10. And .09 to .16 for gaps of .05 to .13 for Reverse Bend Spherical.	Uncompressed heights .26 to .41 inches for gaps of .05 to .33.
	Strip lengths as required. Application-specific cut-to-lengths available for all parts. Certain items available in rolls. Consult TechEtch to determine ideal length.					
Compression	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% uncompressed height to 50%.	Effective compression range of 20% to 70% of uncompressed height. 20% uncompressed height to 50% for Reverse Bend Spherical.	Effective compression range of 20% to 80% of uncompressed height.
RF SEAL	Point contact per finger. Avoid sliding contact.	Continuous contact surface from individual fingers.	Continuous contact surface from individual fingers.	Continuous sliding contact surface from individual fingers.	Point contact per finger. Unidirectional.	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.	125LP55C070, 125LP75C070, 250K4C070, 375P64C070, 250C040, 250M42C040/50/60/70, 250KC070L, 250K2C070L, 187KC080, 95TC040/50/70, 95TC060/70M, 165TC070, 165TC070M, 375C100/135. Also see Cylindrical.	250C040, 375B, 187RGC040/50/60/70, 187RF2C050/60/70, 187RF1C050/70/100, 187RF3C040/50, 187RF4C070, 182RF9C040/50/60/70L, 182RF8C050/70L, 187RA, 187R2A, 187RB, 187RC, 187RJ.	250KC070L, 250K2C070L, 187KC080, 60D, 127A, 187RD2, 134B, 145A, 134C, 187RD, 187H, 134D, 60RC, 75RC, 93RID.	60R, 75RF, 75RE, 187RB1, 60RC, 75RC, 93RID.	375C100, 375C135, 375A, 500A.
	Interactive PDF Print Available. Visit www.techetch.com/shield to create an interactive print. To obtain application assistance or samples, contact TechEtch or our sales representative in your area.					



	CONNECTOR GASKETS	METALIZED FABRIC OVER FOAM CORE GASKETS	CONDUCTIVE FOAM GASKETS	SUPERSHIELD	MULTISHIELD	MONOSHIELD
						
Mounting	Gasket mounting.	Surface mounted using pressure-sensitive self adhesive.	As a rule, die cut gasket available with or without pressure-sensitive conductive adhesive on one side.	Flat gasket die cut from sheet form. Picture frame fabricated from strip. Molded gasket to drawing, extruded section as required.	Surface mount bonded using RTV 3195 (or equivalent) or with pressure-sensitive adhesive. Requires relatively high closure pressure.	As a 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.	A fine monel or aluminum expanded metal foil lled with a silicone elastomer.
Size/Type	Uncompressed height .025 inches for gaps from stock thickness to .02.	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. 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.	Multipoint 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.	Temperature range with foam core -40° to +70°C. Profile tolerances ± .020 on all dimensions. UL 94 V-Rated. 2400 Series 2600 Series	Temperature range -40°C to +70°C. Compression deflection 2-3 psi @ 50% compression. UL 94 V-Rated. 2700 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 TechEtch or our sales representative in your area.						



	WEAVESHIELD	KNITTED WIRE MESH WITH ELASTOMER OR WIRE CORE	SILVERSHIELD ELASTOMER CORE STRIPS	TWINSEAL	SHIELDED ALUMINUM HONEYCOMB VENTS	ELECTRONIC FILTER AND DUST SHIELDS
						
Mounting	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.	Fitted into a channel or surface mounted using pressure-sensitive self-adhesive	Fitted into a channel or surface mounted using pressure-sensitive self-adhesive.	Available with optional pressure-sensitive adhesive (PSA) or special mounting per requirements.	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.	For combined dust and RF seal applications. Ideal for mechanically demanding application.
Composition	A woven mesh of aluminum wire impregnated with either silicone or neoprene elastomer.	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.	Knitted silver plated nylon thread with a strand of monel wire over solid or hollow elastomer core.	Knitted wire mesh of tinplated copper-clad steel (T.C.S.), monel, aluminum or stainless steel bonded to a sponge or solid elastomer (silicone or neoprene).	Aluminum honeycomb assembled in frame and pre-drilled or fitted with captive fasteners for mounting onto an enclosure. A conductive gasket provides electrical continuity.	Composite dust and RF filter in aluminum frame.
Size/Type	Available by the foot length in widths up to 12 inches. Thicknesses are .016 and .020. Alternatively can be die cut and supplied in finished gasket form.	Range of rectangular, "D", round, round with tail, and double round with tail.	Range of rectangular, "D", round, round with tail, and double round with tail.	Strip type gasket material available in self-adhesive form. Also in fabricated frame gasket formed to customer drawing.	Standard and custom range of frame styles to suit particular applications with corresponding selection of gasketing. Honeycomb from .125" - .500" thk. Five standard Fan Vent sizes.	Various frame styles available. Expanded metal grille available and gasket type to suit.
Enviro Seal	Moisture 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.	Splash and weather seal via neoprene or silicone. Pressure seal from silicone rubber.	Does not provide an environmental seal, but versions available with one sheet of honeycomb slanted to 45° or 60° to deflect rain.	Dust seal only. Via corrugations of aluminum mesh in aluminum frame and gasket. Gasket screen is of mesh type.
RF SEAL	Electrical contact via the exposed surfaces of the woven mesh.	Continuous surface of super-imposed knitted wire mesh.	Continuous surface of super-imposed knitted wire mesh.	Knitted wire mesh strips provide a continuous surface of super-imposed wires.	RF seal via single or multiple layers of honeycomb oriented for optimum shielding.	RF seal via corrugated layers of woven mesh.
Mechanical Specs	Temperature range -54°C to +260°C. Tolerance thickness $\pm .004$. Tolerances on rule die cut finished gasket: Width up to 12 $\pm .030$; Hole centers $\pm .015$. 5500 Series	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 $\pm .030$ on all dimensions. Closer tolerances by special order. 2000 Series	Temperature range with neoprene core -54° to +100°C, with silicone core -60° to +260°C. Tolerances $\pm .030$ on all dimensions. Closer tolerances by special order. 2200 Series	Depends on elastomer used in construction. Silicone -60°C to +260°C. Neoprene -54°C to +100°C. Tolerances - Linear: Sponge $\pm .030$, Solid $\pm .015$, Hole xings $\pm .015$. 3000 Series	If silicone gasket, -60°C to +260°C. If neoprene gasket, -31°C to +107°C. With dust filter, tolerances on overall dimensions $\pm .030$. On hole and fastener locations $\pm .015$. 8000 Series 8200 Series 8300 Series	Temperature limited only by softening point of metals used. 8500 Series 8900 Series

Consult TechEtch or our web site www.techetch.com/emi-rfi-shielding/ for more detailed product information and sales representative listing.

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.techetch.com or contact one of our application engineers at 508-747-0300.

A TOTAL CAPABILITY

World Technology Leader

Tech Etch manufactures precision parts for the medical device and equipment, military/aerospace, electronic, telecommunications, and measurement and control industries. Using the latest etching, metal fabrication and metal finishing equipment, Tech Etch specializes in photo etching, forming and laminating engineered components, in addition to flexible circuits. The company has a long history of technological innovation, quality products, excellent customer service, and growth. From its beginnings as a research firm in 1964, Tech Etch has expanded its product offerings, acquired new businesses, and constructed new facilities. Tech Etch operates three manufacturing facilities and has over 500 employees. Corporate headquarters and most of the custom engineering and manufacturing are located in Plymouth, MA, just 40 miles south of Boston. Over 190,000 square feet of floor space, conference and training rooms, and state-of-the-art chemical processes and equipment make this Tech Etch's centerpiece. The other facilities are located in Fall River, Massachusetts and Litchfield, Minnesota.

Wide Range of Processes

Tech Etch performs a wide variety of processes, and this single-source capability enables it to assume total responsibility for the quality and delivery of our precision products. In-plant services include photo etching and chemical milling, artwork generation and phototooling, stamping from coil stock and forming from etched blanks, tool and die making, production heat treating, flexible circuit design and production, welding and soldering, metal finishing, plating, and laser cutting. Secondary operations such as soldering joints to seal seams, spot welding, and the application of pressure sensitive tapes and insulation materials are also available.

ISO 9001 and AS9100D Certification

Tech Etch operates a Quality Management System that is registered to ISO 9001:2015 and AS9100D. This system is designed to control all business processes from Contract Review through the manufacturing processes to final inspection of product. The system seeks to identify and eliminate all nonconformities and prevent their recurrence through Corrective Action and Internal Auditing procedures. Process capability studies are available to guide you on part manufacturability.

Innovation Center

Tech Etch is leading the way to help facilitate you in quick prototyping by means of our state-of-the-art Innovation Center. The center is equipped with leading edge technology, expert engineering team, and top of the line software. TechEtch is your one stop shop to take your idea and get it to production. For more information visit www.techetch.com/innovation-center.

★ Additional Products & Capabilities ★

EMI/RFI SHIELDING

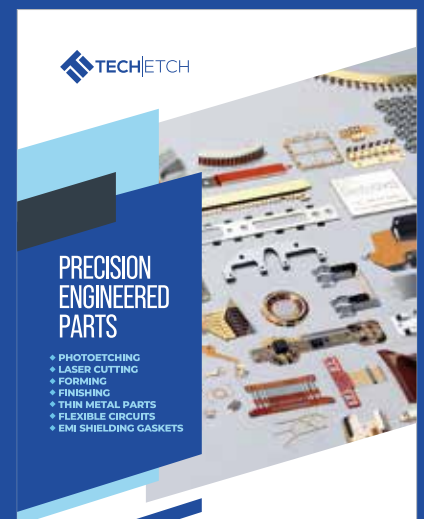
Tech Etch designs and manufactures a broad line of standard and custom EMI/RFI shielding products including BeCu and wire mesh gaskets, conductive elastomers, and board level shielding. Our catalog of standard products is available online or in print.

FLEXIBLE & RIGID FLEX CIRCUITS

Tech Etch has the tools and talents required to create highly reliable flex and ridged-flex circuits for a variety of uses. We also offer SMT component assembly on these products.

PRECISION ENGINEERED PARTS

Tech Etch manufactures a wide variety of lightweight metal parts as small as .0005" in thickness. We use a photo-etching process that allows us to create intricate and detailed pieces that can't be made with other processes.





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<https://techetch.com/emi-rfi-shielding/>

DISTRIBUTOR: <https://techetch.com/global-distributors/>

Manufacturing Facilities - Made in USA

TechEtch 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.



**ISO 9001
REGISTERED**