



# STOCKWELL ELASTOMERICS

MANUFACTURING SOLUTIONS THROUGH ENGINEERED MATERIALS

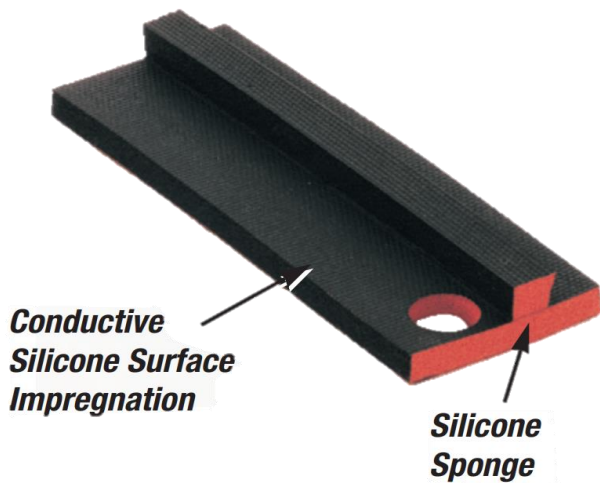
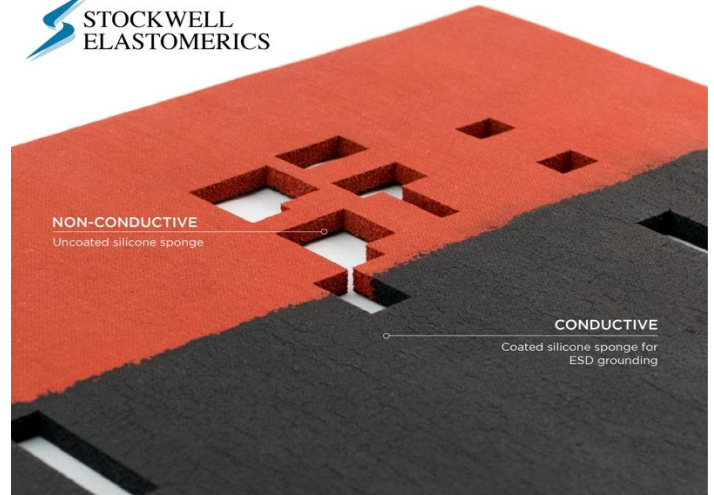
## Silicone Sponge Rubber Gaskets and Seals with Conductive Coating for ESD Protection

Safely Ground ESD Using Silicone Sponge Gaskets and Pads with Conductive Surfaces

### Product Description:

ESD protection is a critical concern in integrated circuits (IC) handling equipment, environmental test chambers, and burn-in ovens. **Silicone sponge gaskets with conductive surfaces** used to seal door closures and other areas can greatly reduce static build up by providing a convenient ground.

Testing standards such as Mil Spec and automotive qualified integrated circuits require temperatures from -70°F to 300°F, where silicone rubber performs particularly well.



Stockwell Elastomerics utilized advanced polymer technology to develop the process of impregnating silicone sponge, a normally high dielectric material, with **carbon filled conductive silicone rubber**.

Gaskets and pads are fabricated to virtually any configuration or size, then impregnated with **Stockwell Elastomerics' T62 conductive silicone coating**. The conductive silicone is then cured and becomes an integral part of the silicone sponge gasket without affecting its compressibility or resiliency.

[Click Here for Video: T62 Conductive Coating Demonstration](#)

Silicone Sponges with Conductive Coatings					
Stockwell Product Code	Grade	Force Deflection <sup>1</sup>	Compression Set, % Max <sup>2</sup>	Surface Resistivity <sup>3</sup>	Available Thickness
S480-62-CON	Soft	2-7	5	20,000	.093" to 1.0"
S470-62-CON	Medium	6-14	25	20,000	.032" to 1.0"
S418-62-CON	Firm	12-20	15	20,000	.062" to 1.0"

<sup>1</sup> Force/Deflection, PSI (Compressed 25% at 73°F) per ASTM D1056  
<sup>2</sup> Compression Set, %, (Compressed 50% for 22 Hours at 212°F) per ASTM D1056  
<sup>3</sup> Surface Resistivity is Ohms per Square Inch, determined by ASTM D257



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Silicone sponge sheets, gaskets and pads with conductive coating can be provided with a backing of acrylic or silicone polymer pressure sensitive adhesive. For Z-axis conductivity, adhesives filled with metallized fibers such as **3M9713** or **3M9719** can provide superior performance. Gaskets and pads can also be cold bonded with **RTV60-CON** carbon filled conductive silicone rubber adhesive for a conductive bond to metal housings or tooling fixtures.

Adhesives			
Adhesive	Conductive	Bond Strength	Typical Application
<b>3M 9713 Conductive Acrylic</b>	Yes	Strong	XYZ conductivity + high tack
<b>3M 9719 Conductive Silicone</b>	Yes	Fair	XYZ conductivity + high temps
<b>Non-Conductive Acrylic</b>	No	Strong	XY conductivity + high tack
<b>Non-Conductive Silicone</b>	No	Fair	XY conductivity + high temps
<b>RTV60-CON</b>	Yes	Strong	XYZ conductivity + metal surfaces

**RTV 60-CON adhesive/sealant** is a one part electrically conductive silicone rubber elastomer adhesive for bonding electrically conductive silicone to metal assemblies, typically used to promote ESD protection. It cures at room temperature when exposed to atmospheric moisture. The by-products of curing are **amines**, not acetic acid. SDS is available.

[Click Here for Video: Bonding an ESD Conductive Pad to Aluminum Using RTV60-CON Adhesive](#)

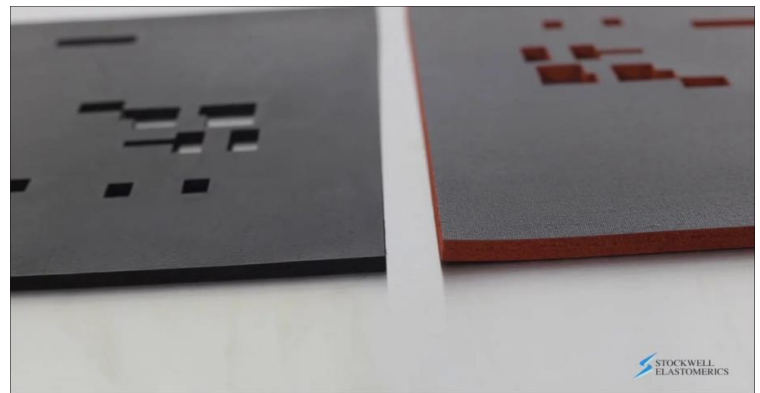
Conductive silicone sponge is available in three different forms:

**1. Conductive coated sheets**, from 12" x 36" to 36" x 36". This allows users to cut their own configurations and maintain an inventory of material. However, cutting into a coated sheet will isolate the top and bottom conductive surfaces, so a dab of conductive caulk, such as Stockwell Elastomerics' RTV 60-CON, can provide a grounding path across the exposed silicone sponge edge.

**2. Die cut or custom fabricated gaskets, pads, and custom components** coated on all surfaces.

**3. Extruded silicone sponge profiles** including hollow D shapes, P shapes, and others. Call for full information on possible extrusion designs.

**Samples are available.**



[Contact Stockwell Elastomerics](#) for samples or further assistance with ESD, EMI, and electrically conductive rubber.