



5750-S - Conductive rubber sheets



The rubber is made conductive by incorporating small conductive metal particles throughout the material. It can provide an EMI-proof and watertight seal in narrow constructions.

Electrically conductive rubbers are typically used for EMI applications. But they are also useful for EMP protection, wave-guide applications and against static electricity. The rubber can be filled with silver, nickel, silvered glass, silvered aluminium, or graphite (only for ESD). Commercial EMI applications often choose **Nickel-graphite conductive rubber (Part number 5760)** or **Graphite conductive rubber (Part number 5755)** from a costs point of view, while military and aerospace applications often call for **Silver copper silicone conductive rubber (Part number 5750)** to meet Mil-G-83528C specifications. In military or aerospace, fluorosilicone versions may also be used due to their chemical and fuel resistance.

As the material shields high frequencies, electrically conductive rubber shows a shielding effect of 60 dB at 30MHz ~ 10GHz. Due to its excellent conductivity, grounding, and EMI shielding effect, it is well suited for military communications equipment. The rubber can be manufactured in various shapes such as sheets, moulded parts, die-cut, strips, o-rings, etc.

Benefits

- Excellent conductivity on the entire surface
- Excellent electromagnetic shielding effect
- Easy die-cutting, kiss-cutting and slitting
- Temperature ranges of -60 to +185 °C (under certain circumstances, tolerance can be up to 220°C)

Available sheet thicknesses

Ag/Al Silicone conductive rubber (silver plated aluminium) 5750							
Thickness (mm)	1.0	1.2	1.5	1.7	2.0	2.5	3.0
Part number	5750-1.0	5750-1.2	5750-1.5	5750-1.7	5750-2.0	5750-2.5	5750-3.0
Graphite conductive rubber 5755							
Thickness (mm)	1.0	1.2	1.5	1.7	2.0	2.5	3.0
Part number	5755-1.0	5755-1.2	5755-1.5	5755-1.7	5755-2.0	5755-2.5	5755-3.0
Ni-Graphite conductive rubber (dark gray) 5760							
Thickness (mm)	1.0	1.2	1.5	1.7	2.0	2.5	3.0
Part number	5760-1.0	5760-1.2	5760-1.5	5760-1.7	5760-2.0	5760-2.5	5760-3.0

Please note: Items in **bold** type are available from stock. Sheets can be made thinner by slitting. Thicknesses up to 6.35mm on request

Technical properties

Typical properties	5750	5755	5760
Filler	Ag/Al	Graphite	Ni-graphite
Base polymer	Silicone	Silicone	Silicone
Width (mm)	430 x 450 (larger sizes on request)		
Thickness (mm)	0.2 to 3 (thicker on request)		
Elongation, %, min.	90	50	50
Flame resistance, UL94 (horizontal)	HB	HB	HB
Flame resistance, UL94 (vertical)	V-0	V-0	V-0
Volume resistance, Ohm-cm (expression of conductivity)	0.008	1.8	0.05
Hardness	5750	5755	5760
Shore A (1 mm thickness):	73	71	70
Shore A (2 mm thickness)	70	75	60
Tensile strength, psi, min.	90	50	50
Shielding effectiveness (dB)	5750	5755	5760
100 MHz	120	70	100
500 MHz	120	70	100
1 GHz	110	80	110
10 GHz	85	55	85
These values are measured under laboratory conditions. Results may differ in other situations - please read our Guarantee .			

Conductive adhesive information (Conductive PSA)

Property	Unit	Outcome	Test method
Surface resistance	Ω/sq	<0.10	MIL-DTL-83528C
Adhesive strength	g/25mm	850	ASTM D 3330
Conductive PSA	-	Acrylic + Ni	-
Liner	-	paper, Film	-

* Please note: Conductive adhesive is **optional**. By default, these Conductive rubber gaskets are supplied without adhesive.

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What questions need to be answered to select the right material?

- What is the approximate shielding effectiveness you need to achieve for your application?
- What environment will this material be exposed to? Does the rubber need to be solvent or fuel resistant (fluorosilicone)?
- Are you looking for a semi-conductive/static dissipating material or is this a true EMI/RFI shielding application?

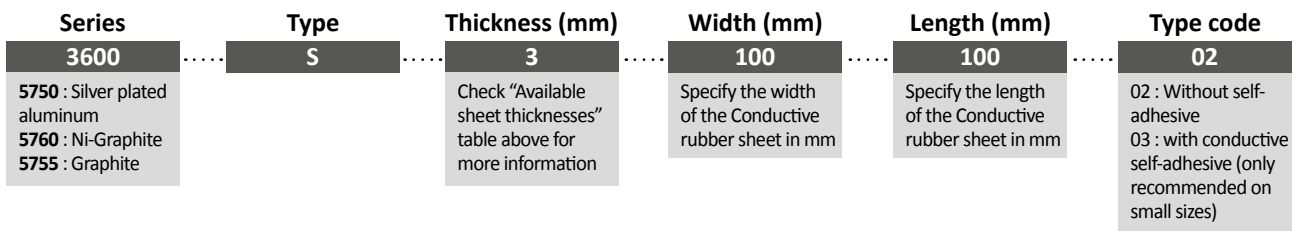
How does the conductive filler material in the rubber compare to costs and performance?

Part number	Conductive filler	Cost	Conductivity	Typical shielding effectiveness*
5750	Silver plated aluminum	\$\$\$	Extremely conductive	120 dB
5760	Ni-graphite	\$\$	Super conductive	100 dB
5755	Graphite	\$	Very conductive	70 dB

* More information about shielding performance can be found under "technical properties" (a few paragraphs up)

How to order

When you want to order the 5750-S - Conductive rubber sheets please specify the part number as follow:



Material options on request

- Fluorosilicone with nickel graphite particles (fuel resistant)
- Silicone with nickel particles for aluminium parts
- Fluorosilicone with nickel particles
- Silicone with nickel-plated aluminium particles
- Fluorosilicone with silver-plated aluminium particles

Electrically conductive rubber is available as

- Sheets
- Moulded parts
- Die-cut or flash cut
- [Strip/Profile](#)