



5750-P - Conductive rubber sheets



The rubber in these profiles is made conductive by means of small conductive metal particles, distributed throughout the rubber. It can provide an EMI-proof and a pressure watertight seal in narrow constructions.

Electrically conductive rubbers are typically used for EMI applications. Also used 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 call for **Nickel-Graphite Conductive Rubber (Partnumber 5760)** or **Graphite Conductive Rubber (Partnumber 5755)** due to costs, whereas military and aerospace applications often call for **Silver Aluminium Silicone Conductive Rubber (Partnumber 5750)** to meet Mil-G-83528C specifications. In military or aerospace, fluorosilicone versions may also be used for its 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 communication equipment. The rubber can be manufactured in various shapes such as sheets, moulded parts, die-cut, strips, o-rings, etc.

Benefits

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

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.

Technical properties

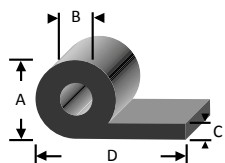
Typical properties	5750	5755	5760
Filler	Ag/Al	Graphite	Ni-Graphite
Base polymer	Silicone	Silicone	Silicone
Width (mm)	210 x 300 (Bigger sizes on request)		
Thickness (mm)	0.2 to 3 (Thicker on request)		
Elongation, %, min.	90	50	50
Flame resistance, UL94 (Horizontal)	HB	HB	HB
Flame resistance, UL94 (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. In your situation results may differ, please read our Guarantee.



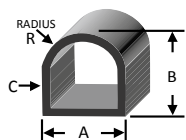
Available in different sizes and shapes

5750- P - Conductive rubber profiles



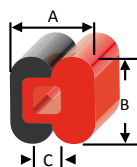
Conductive P profile (P)

Part number	A (mm)	B (mm)	C (mm)	D (mm)	Size number
X-P-5.0/2.0/1.6/12.7-X	5.0	2.0	1.6	12.7	5.0/2.0/1.6/12.7
X-P-5.0/2.0/1.6/21.6-X	5.0	2.0	1.6	21.6	5.0/2.0/1.6/21.6
X-P-6.4/3.2/1.6/12.7-X	6.4	3.2	1.6	12.7	6.4/3.2/1.6/12.7
X-P-6.4/3.2/1.6/15.9-X	6.4	3.2	1.6	15.9	6.4/3.2/1.6/15.9
X-P-6.4/3.2/1.6/22.2-X	6.4	3.2	1.6	22.2	6.4/3.2/1.6/22.2
X-P-7.9/4.8/1.6/22.2-X	7.9	4.8	1.6	22.2	7.9/4.8/1.6/22.2
X-P-9.1/6.5/1.8/19.8-X	9.1	6.5	1.8	19.8	9.1/6.5/1.8/19.8



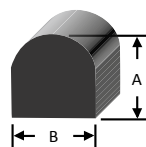
Conductive hollow D profile (D)

Part number	A (mm)	B (mm)	C (mm)	R (mm)	Size number
X-D-4.0/4.0/1.1/2.0-X	4.0	4.0	1.1	2.0	4.0/4.0/1.1/2.0
X-D-4.8/4.7/1.3/2.4-X	4.8	4.7	1.3	2.4	4.8/4.7/1.3/2.4
X-D-6.4/6.4/1.7/3.2-X	6.4	6.4	1.7	3.2	6.4/6.4/1.7/3.2
X-D-7.9/7.9/1.3/4.0-X	7.9	7.9	1.3	4.0	7.9/7.9/1.3/4.0
X-D-12.4/8.2/2.0/6.2-X	12.4	8.2	2.0	6.2	12.4/8.2/2.0/6.2



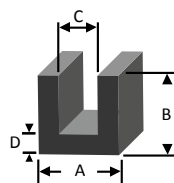
DD profile with waterseal (DD)

Part number	A (mm)	B (mm)	C (mm)	Size number
D-D-4.5-4.75-1.65	4.5	4.75	1.65	4.5/4.75/1.65



Solid D : (SD)

A (mm)	B (mm)	Size number
1.6	1.4	1.6-1.4
1.7	1.6	1.7-1.6
2.0	2.4	2.0-2.4
2.3	2.0	2.3-2.0
2.5	1.6	2.5-1.6
2.8	3.2	2.8-3.2
3.4	3.1	3.4-3.1
4.0	3.0	4.0-3.0
4.5	4.5	4.5-4.5
4.8	4.8	4.8-4.8
6.4	6.4	6.4-6.4



U channel profile (U)

A (mm)	B (mm)	C (mm)	D (mm)	Size number	Size number
2.4	2.5	0.9	0.8	2.4-2.5-0.9-0.8	4.0/4.0/1.1/2.0
3.2	2.8	0.7	1.3	3.2-2.8-0.7-1.3	4.8/4.7/1.3/2.4
3.2	5.7	0.5	1.9	3.2-5.7-0.5-1.9	6.4/6.4/1.7/3.2
4.0	4.0	1.6	1.2	4.0-4.0-1.6-1.2	7.9/7.9/1.3/4.0
4.5	4.0	1.2	1.9	4.5-4.0-1.2-1.9	12.4/8.2/2.0/6.2
8.3	6.0	1.6	2.9	8.3-6.0-1.6-2.9	8.3/6.0/1.6/2.9

O-profiles

Our conductive rubber profiles are listed in a separate product series, the 7900 series. Are you looking for a conductive rubber o-profile, please [refer to this page](#).





5750-P - Conductive rubber sheets

What questions need to be answered to pick 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 is the conductive filler material in the rubber connected 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 at "technical properties"

How to order

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

Series	Type	Part number	Type
5750	P	5.0/2.0/1.6/12.7	02
5750 : Silver plated aluminium 5760 : Ni-graphite 5755 : Graphite	P : P Profile D : Hollow D profile SD : Solid D profile U : U channel profile R : Rectangular profile	See profile part numbers tables on page 2	02 : Without self-adhesive 03 : With conductive self-adhesive (only recommended on small sizes)

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