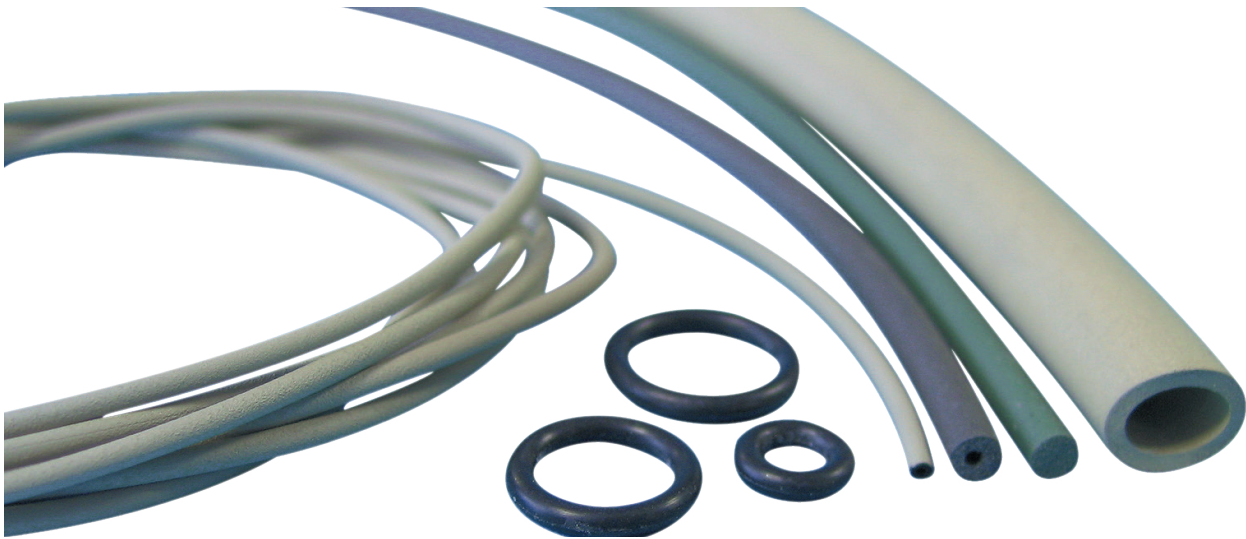


# O-PROFILES 7900

For EMI shielding applications in grooves

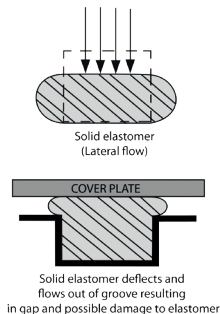


Several types of O-profiles have been developed for different applications, each with its own advantages. O-profiles were originally designed for high-performance shielding, mainly for military applications. They are used when environmental sealing and EMI screening are required, and where there is not much space.

Three kinds of extrusion types are available: **1: hollow, 2: solid, 3: Cell Rubber**. These extrusion cores can be covered with metallized fabric foil or they can be made out of conductive rubber. For optimal shielding performance a compression of 5-10% is recommended for solid elastomer's and 10-50% for hollow extrusions and sponge rubbers.

## COMPRESSION

Solid elastomer's cannot be compressed much. They are easily deformed but the volume does not change as would be the case with sponge elastomer (EPDM, Neoprene) so that allowance for material flow must be considered in the groove design.



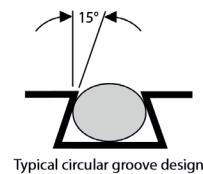
## BENEFITS

- Easy to fit into grooves
- Deflection up to 50%
- Low closure force

## OPTIONS (ON REQUEST)

- Cut into accurate lengths or endless O-rings
- Drop-out prevention fixtures
- UL94V-0 flame-retardant version
- High temperature-resistant Silicone core (up to 220 °C)
- Fluorosilicone (silver aluminum, silver copper, nickel, nickel graphite) for applications with chemicals

The figure below shows a groove design. This is a mechanically retain circular cross-section gaskets by side friction.



## » O-PROFILE 7900

### MATERIAL OPTIONS

7900 series Conductive O-profiles can be delivered in the following materials:

Series	Material	Code (old)	Cover options
7900NEO	Neoprene	79-X-1-1	Amucor foil
		79-X-1-2	Conductive textile
7900SIL	Silicone	79-X-2-1	Amucor foil
		79-X-2-2	Conductive textile
7900EPDM	EPDM	79-X-4-1	Amucor foil
		79-X-4-2	Conductive textile
7900SPA	Silvered particles filled silicone rubber	79-X-5-3	-
7900NIG	Nickel filled silicone rubber	79-X-5-4	-
7900GRA	Graphite filled silicone rubber	79-X-5-5	-

### EXTRUSION TYPES

1: Hollow



2: Solid



3: Cell Rubber



### SPECIAL MATERIALS (ON REQUEST)

These O-profiles are also available in special materials for special applications for example applications with chemicals. Below is a list of special materials. For availability and delivery please email [info@hollandshielding.com](mailto:info@hollandshielding.com).

- Silicone Carbon
- Fluorosilicone Nickel Graphite
- Silicone Nickel Graphite Flame Retardant
- Silicone Silver Aluminum
- Fluorosilicone Silver Aluminum
- Fluorosilicone Nickel
- Silver Plated Nickel
- Silver Glass

### SHIELDING PERFORMANCE AND TECHNICAL DETAILS

Conductive material	Conductive fabric	Amucor	Graphite	Nickel graphite	Silver aluminum	Silver copper	Nickel	Fluoro Nickel graphite	Fluoro silver aluminum	Fluoro silver copper	Fluoro nickel	Shielding Performance STD 285 /MIL-DTL 83528C (dB)		
												Standard	On request	
Frequency														
10 MHz	N/A	N/A	30	115	111	115	114	116	114	116	110			
100 MHz	60	65	65	121	120	122	115	122	122	125	116			
400 MHz	98	110	60	119	120	119	121	119	118	118	124			
1 GHz	94	108	N/A	122	121	123	114	122	121	124	117			
2 GHz	91	105	40	122	119	122	122	122	123	121	112			
6 GHz	90	102	N/A	115	115	116	117	114	109	117	111			
10 GHz	90	100	30	114	112	115	114	107	114	115	113			
18 GHz	N/A	N/A	N/A	106	105	104	105	105	103	104	103			
Operating Temp Range (°C)	-	-	+160	+160	+160	+125	+160	+160	+160	+125	+160			
Color	Gray	Silver	Black	Dark Gray	Beige	Dark Tan	Gray	Green	Light Green	Green	Dark Green			
Shore Hardness (A +/-5) ASTM D2240	-	-	60	60	65	65	65	65	70	65	70			
Volume Resistivity (ohms) ASTM D991	-	-	2.2	0.04	0.008	0.005	0.1	0.05	0.01	0.005	0.1			
Specific Gravity (+/- 0.25)	-	-	2.0	2.0	2.0	3.5	4.5	2.2	2.0	4.0	4.8			

These values are measured under laboratory conditions. In other situations, results may differ. Please read our Guarantee.

### ORDER EXAMPLE

Series	Extrusion type	Cover*	Size number	Length (mm)
7900NEO 7900SIL 7900EPDM 7900SPA 7900NIG 7900GRA	1: Hollow 2: Solid 3: Sponge rubber	A: Amucor foil T: Conductive textile * no cover available for material SPA + NIG + GRA	See extrusion type sizes in the tables	