

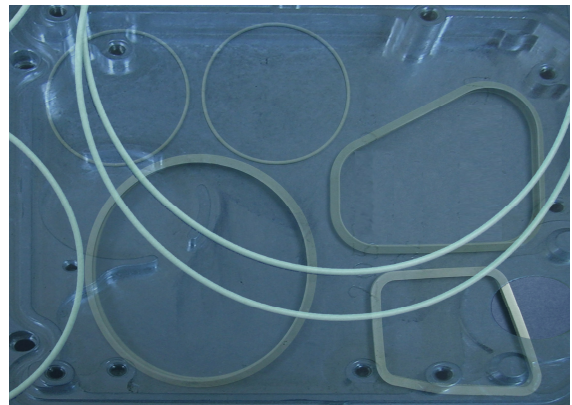
# e-Sil 400 Series

## Conductive Silver-Glass Silicone Rubber

**e-Sil 400 series** is composed of a silicone elastomer filled with silver plated glass particles exhibiting high electrical conductivity, providing highly effective shielding and offering excellent moisture sealing.

The **e-Sil 461** and **e-Sil 451** are high performance materials, in high and low hardness, which by far exceeds the requirements of MIL-G-83528/ M. The **e-Sil 466** and **e-Sil 456** are commercial grades, in high and low hardness, providing very good cost/performance engineering solutions. Excellent compression set is achieved through unique process to enable mechanical sealing properties matched to non-conductive silicones. Enhanced electrical conductivity and shielding properties and good resistance to aging provides better performance in existing uses and gives endless freedom in designing new complicated three dimensional shapes.

- Good tensile and tear strength.
- Silver/Glass filler minimize the risk for galvanic corrosion.
- Excellent compression set to maintain sealing force over very long period of time - nearly half the value required by Mil-G-83528.
- Effective over a wide range of temperatures.
- Good sealing under moderate closing force.
- Improved mechanical properties enables molding of complicated geometry and delicate parts.
- The material provides cost effective production solutions.
- Available in sheets in every thickness and custom die-cut parts.
- Available as custom molded parts.



Physical Properties	Typical Values				Test Method
	High Performance		Commercial		
Type					
Grade Name	<b>e-Sil461</b>	<b>e-Sil451</b>	<b>e-Sil466</b>	<b>e-Sil456</b>	
Elastomer binder	Silicone				
Conductive filler	Silver Glass Plated Particles				
Color	Beige				
Operational Temperature, °C	(55-) to (+160)				
Hardness, Shore A, ± 7	65	55	65	55	ASTM D-2240
Tensile Strength, Mpa (psi), Min	1.7 (250)	1.5 (220)	2.0 (290)	(1.6) 230	ASTM D-412
Elongation, %, Min	250	510	260	450	ASTM D-412
Tear Strength kN/m (lb/in) , Min	9.6 (55)	8.7 (50)	11.3 (65)	(10.8) 62	ASTM D-624
Specific Gravity, gr/cm <sup>3</sup> , ±0.25	1.87	1.80	1.84	1.80	ASTM D-792
Compression Set, 70hr@100°C, Max	20%	21%	25%	25%	ASTM D-395
Volume Resistivity, Ω-cm	0.006	0.006	0.015	0.015	Mil-DTL-83528
Shielding Effectiveness					
H-Field, 200 kHz, db	50	50	50	50	
E-Field, 100 MHz-10GHz, db	80-100	80-100	80-100	80-100	

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