

Conductive Silicone Gaskets

Specifications

PERFORMANCE CHARACTERISTICS

Conductive Particles	Carbon	Nickel Graphite	Silver Glass	Silver Nickel	Silver Aluminum	Silver Copper	Silver Low Density
MIL-G-83528 Type	N/A	N/A	M	L	B, D	A, C, K	J
Operating Temperature Min (°C) Max (°C)	-55 175	-55 200	-55 200	-55 180	-55 200	-55 125	-55 160
Specific Gravity	1.2	1.95	1.8	4	2	3.5	1.7
Hardness (Shore A) Durometer	70	70	65	75	65	65/75/85	45
Compression Deflection (% min)	3.5	3.5	3.5	3.5	3.5	3.5	8
Tensile Strength (lbs/sq-in)	450	150	200	200	200	200	150
Elongation (%)	100	300	280	300	280	300	100
Compression Set (%)	30	35	30	30	30	30	30
Tear Strength (lbs/in)	40	40	35	30	35	25	20
Volume Resistivity (ohm-cm)	8	0.1	0.005	0.005	0.008	0.004	0.001
Shielding Effectiveness (20 MHz - 10 GHz)	40	80	110	100	110	110	80
EMP Survivability	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Outgassing of Conductive Elastomers

Many of the conductive elastomers produced by SEM are silicone compounds. Due to the high electrical insulative properties of silicone, there has been growing concern that the outgassing of volatile residues from silicone based conductive compounds may interfere with critical electrical contacts. **NASA** has set specification limits for the **Total Mass Loss (TML) and Collected Volatile Condensable Materials (CVCM) both determined by ASTM E595-84** for the use in spacecraft applications. The normally accepted limit for **TML** is 1.00% and the **CVCM** is 0.10%. Use of materials meeting the above listed "acceptable criteria" does not deem the materials acceptable for an application. SEM's silicone has specific manufacturing procedures designed to reduce both **TML** and **CVCM** to well below acceptable limits, thereby further reducing the potential and detrimental outgassing. Listed on the next page are typical results you can expect of SEM produced Conductive Silicone Compounds when tested to **ASTM E595-84**.