Material Selection Guide

MATERIAL SPECIFICATIONS

LTE Material Number		LTE-10	LTE-15	LTE-45	LTE-20	LTE-65	LTE-50	LTE-25	LTE-55	LTE-75
Elastomer Type		SIL	SIL	SIL	SIL	SIL	SIL	SIL	SIL	SIL
Filler Material		Ag/Cu	Ag/Cu	Ag/Cu	Ag/Al	Ag/Ni	Ag/G	Ag	Ag	Ag
MIL-DTL-83528 Material Type:		A	G (1)	K	B	L	M	H	E	J
Electrical Properties	**Test Method**									
Volume Resistivity (Ohm-cm) (Max)	MIL-DTL-83528	.004	.007	.005	.008	.005	.006	.005	.002	.010
Shielding Effectiveness 20 MHz-10GHz – (dB Min)	MIL-DTL-83528	110	110	110	100	100	100	110	110	80
Physical Properties										
Specific Gravity (+-13%)	ASTM D792	3.5	4.75	3.5	2.0	4.0	1.9	4.0	3.5	1.7
Hardness - Shore A (+-7)	ASTM D2240	65	80	85	65	75	65	80	65	45
Tensile Strength – PSI (Min)	ASTM D412	200	600	400	200	200	200	400	300	150
Elongation % (Min/Max)	ASTM D412	100/300	20-N/A	100/300	100/300	100/300	100/300	90/290	200/500	50/250
Tear Strength – PPI (Min)	ASTM D624 (DIE C)	25	70	40	30	30	30	60	50	20
Compression Set % (Max)	ASTM D395	32	N/A	35	32	32	30	60	45	35
Upper Operating Temp (°C)	ASTM D1328	125	125	125	160	125	160	160	160	160
Lower Operating Temp (°C)	ASTM D1329	-55	-45	-45	-55	-55	-55	-55	-55	-55
Electrical Stability										
After Heat Aging, Ω cm, max		.010	.010	.010	.010	.010	.015	.008	.010	.015
After Break, Ω cm, max		.008	N/A	.010	.015	.010	.009	.006	.010	.020
During vibration, Ω cm, max		.006	.010	.010	.012	.010	.009	.006	.010	.015
After vibration, Ω cm, max		.004	.007	.005	.008	.005	.006	.005	.002	.010
After Exposure to EMP, Ω cm, max		.010	.010	.010	.010	.010	.015	.008	.010	.015
Compression / Deflection, %, min		3.5	2.5	2.5	3.5	3.5	3.5	2.5	2.5	8.0
Fluid Immersion - Survive or Non-Survive (N/S)		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

ELASTOMER TYPE

Silicone = SIL	Fluorosilicone = FSIL	Ethylene Propylene Diene Monomer = EPDM

Silver = Ag	Silver Plated Copper =

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MATERIAL SPECIFICATIONS

LTE Material Number		LTE-60	LTE-60-40D	LTE-30	LTE-40	LTE-40-45D	LTE-35	LTE-90	LTE-70	LTE-85
Elastomer Type		SIL	SIL	F.SIL	F.SIL	F.SIL	F.SIL	F.SIL	EPDM	EPDM
Filler Material		Ni/C	Ni/C	Ag/Cu	Ag/Al	Ag/Al	Ag	Ni/C	Ag/Al	Ni/C
MIL-DTL-83528 Material Type:		-	-	C	D	-	F	-	-	-
Electrical Properties	**Test Method**									
Volume Resistivity (Ohm-cm) (Max)	MIL-DTL-83528	.100	.100	.010	.012	.015	.002	.100	.010	.100
Shielding Effectiveness 20 MHz-10GHz – (dB Min)	MIL-DTL-83528	100	100	110	90	90	110	100	90	75
Physical Properties										
Specific Gravity (+-13%)	ASTM D792	1.9	1.9	4.0	2.0	1.9	4.0	2.2	2.2	2.2
Hardness - Shore A (+-7)	ASTM D2240	55*	40	75	70	45	75	70	80	80
Tensile Strength – PSI (Min)	ASTM D412	150	125	180	180	100	250	150	200	200
Elongation % (Min/Max)	ASTM D412	100/300	100/300	100/300	60/260	60/260	100/300	60/250	70/260	70/260
Tear Strength – PPI (Min)	ASTM D624 (DIE C)	30	20	35	35	20	40	40	60	60
Compression Set % (Max)	ASTM D395	25	40	35	30	35	60	25	50	40
Upper Operating Temp (°C)	ASTM D1328	160	160	125	160	160	160	160	160	125
Lower Operating Temp (°C)	ASTM D1329	-55	-55	-55	-55	-55	-65	-55	-40	-40
Electrical Stability										
After Heat Aging, Ω cm, max		.200	.150	.015	.015	.015	.010	.200	.200	.250
After Break, Ω cm, max		.100	.250	.015	.015	.025	.010	.100	.200	.250
During vibration, Ω cm, max		.100	.150	.015	.015	.015	.010	.100	.015	.150
After vibration, Ω cm, max		.100	.100	.010	.012	.012	.002	.100	.010	.100
After Exposure to EMP, Ω cm, max		.100	.150	.015	.015	.015	.010	.100	.015	.100
Compression / Deflection, %, min		8.0	3.0	3.5	3.5	3.5	3.5	5.0	3.0	3.0
Fluid Immersion - Survive or Non-Survive (N/S)		N/S	N/S	Survive	Survive	Survive	Survive	Survive	N/S	N/S

*Extruded materials will be Shore A 70 (+/-7)

FILLER MATERIAL

Ag/Cu | Silver Plated Aluminum = Ag/Al | Silver Plated Nickel = Ag/Ni | Silver Plated Glass = Ag/G | Nickel Coated Graphite = Ni/C