

ECR Material no.				ECR-101	ECR-102	ECR-103	ECR-104	ECR-105	ECR-106	ECR-107	ECR-108	ECR-109	ECR-110	ECR-111	ECR-112
Filler Type				Ag/Cu	Ag/Al	Ag/Cu	Ag/Al	Ag	Ag	Ag/Cu	Ag	Ag	Ag/Cu	Ag/Ni	Ag/Glass
Based Material				SIL	SIL	FSIL	FSIL	SIL	FSIL	SIL	SIL	SIL	SIL	SIL	SIL
OPERATING TEMP RANGE	°C	MIN	Test Method	-55	-55	-55	-55	-55	-65	-45	-55	-55	-45	-55	-55
		MAX		+125	+160	+125	+160	+160	+160	+125	+160	+160	+125	+125	+160
PHYSICAL PROPERTIES															
SPECIFIC GRAVITY	g/cc	± .25	ASTM D792	3.5	2	4	2	3.5	4	4.75	4	1.7	3.54	4	1.9
HARDNESS	Shore A	± 7	ASTM D2240	65	65	75	70	65	75	80	80	45	85	75	65
COMPRESSION/DEFLECTION	%	MIN	ASTM D575	3.5	3.5	3.5	3.5	2.5	3.5	2.5	2.5	8	2.5	3.5	3.5
TENSILE STRENGTH	PSI	MIN	ASTM D412 (DIE C)	200	200	180	180	300	250	600	400	150	400	200	200
ELONGATION	%	MIN	ASTM D412 (DIE C)	100	100	100	60	200	100	20	90	50	100	100	100
		MAX		300	300	300	260	500	300	N/A	290	250	300	300	300
COMPRESSION SET	%	MAX	ASTM D395	32	32	35	30	45	60	N/A	60	35	35	32	30
TEAR STRENGTH	PPI	MIN	ASTM D624 (DIE C)	25	30	35	35	50	40	70	60	20	40	30	30
ELECTRICAL PROPERTIES															
VOLUME RESISTIVITY (as received)	(Ω-CM)	MAX	MIL-DTL-83528C	0.004	0.008	0.01	0.012	0.002	0.002	0.007	0.005	0.01	0.005	0.005	0.006
SHIELDING EFFECTIVENESS (30 Mhz-10 Ghz)	dB	MIN	MIL-DTL-83528C MIL-STD-285	116	114	114	118	124	124	110	110	80	120	125	100
30 MHz				115	115	115	111	118	119	115	70	60	114	120	118
100 MHz (E-Field)				113	105	117	126	131	127	131	120	100	132	126	131
400 MHz (E-Field)				114	112	110	126	123	128	143	120	100	117	133	134
2 GHz (Plane Wave)				125	123	114	117	133	134	124	120	90	113	132	132
10 GHz (Plane Wave)				114	114	114	109	113	113	112	120	80	124	112	112
ELECTRICAL STABILITY DURING VIBRATION (Ω-CM)	DURING	MAX	MIL-DTL-83528C	0.006	0.012	0.015	0.015	0.01	0.01	0.01	0.006	0.015	0.01	0.01	0.009
	AFTER			0.004	0.008	0.01	0.012	0.002	0.002	0.007	0.005	0.01	0.005	0.005	0.006
ELECTRICAL STABILITY AFTER BREAK	(Ω-CM)	MAX	MIL-DTL-83528C	0.008	0.015	0.015	0.015	0.01	0.01	N/A	0.006	0.02	0.01	0.01	0.009
UPPER TEMPERATURE	(°C)	MAX	ASTM D1329	+125	+160	+125	+160	+160	+160	+125	+160	+160	+125	+125	+160
LOW TEMP FLEX (°C)	TR10	MIN	ASTM D1329	-55	-55	-55	-55	-55	-65	N/A	-55	-55	-45	-55	-55
	TR70			-55	-55	-40	-40	-40	-40	N/A	-40	-55	-35	-55	-55
VOLUME RESISTIVITY (after life testing)	(Ω-CM)	MAX	MIL-DTL-83528C	0.01	0.01	0.015	0.015	0.01	0.01	0.01	0.008	0.015	0.01	0.01	0.015
VOLUME RESISTIVITY AFTER ELECTROMAGNETIC PULSE (EMP) EXPOSURE	(Ω-CM)	MAX	MIL-DTL-83528C	0.01	0.01	0.015	0.015	0.01	0.01	0.01	0.008	0.015	0.01	0.01	0.015
FLUID CHARACTERISTICS															
FLUID IMMERSION	-	-	MIL-DTL-83528C	N/S	N/S	SUR	SUR	N/S	SUR	N/S	N/S	N/S	N/S	N/S	N/S



ECR Material no.				ECR-213	ECR-214	ECR-215	ECR-216	ECR-217	ECR-218	ECR-219	ECR-222	ECR-223	
Filler Type				Ni/C	Ag/Al	Ni/C	Ag/Ni	Ag/Al	Ni/C	Ni/C	C	C	
Based Material				SIL	SIL	FSIL	EPDM	EPDM	EPDM	POLYURETHANE	EPDM	SIL	
OPERATING TEMP RANGE	°C	MIN	Test Method	-55	-55	-45	-40	-40	-40	-50	-55	-50	
		MAX		+150	+160	+125	+125	+125	+125	+160	+160	+160	
PHYSICAL PROPERTIES													
SPECIFIC GRAVITY	g/cc	± .25	ASTM D792	1.90	2	2.20	3.70	2.20	2.20	2.53	4	1.3	
HARDNESS	Shore A	± 7	ASTM D2240	60	75	70	75	75	75	93±3	80	70	
COMPRESSION/DEFLECTION	%	MIN	ASTM D575	3.5	2.5	3.0	3.5	3.0	2.0	2.0	2.5	2.0	
TENSILE STRENGTH	PSI	MIN	ASTM D412 (DIE C)	200	180	190	200	200	200	500	400	600	
ELONGATION	%	MIN	ASTM D412 (DIE C)	100	60	60	100	60	100	130	90	100	
		MAX		300	260	260	300	260	300	NA	290	300	
COMPRESSION SET	%	MAX	ASTM D395	30	30	40	40	40	40	40	60	40	
TEAR STRENGTH	PPI	MIN	ASTM D624 (DIE C)	35	35	40	60	50	50	50	60	50	
ELECTRICAL PROPERTIES													
VOLUME RESISTIVITY (as received)	(Ω-CM)	MAX	MIL-DTL-83528C	0.100	0.012	0.100	0.015	0.012	0.100	.35	20	5.0	
SHIELDING EFFECTIVENESS (200 KHz-10 GHz)	dB	MIN	MIL-DTL-83528C MIL-STD-285	100	100	100	100	95	75	NA	50	50	
200 KHz				—	—	—	—	—	—	—	—	—	—
100 MHz (E-Field)				100	100	100	100	100	80	NA	70	70	
500 MHz (E-Field)				100	100	100	100	90	80	NA	60	60	
2 GHz (Plane Wave)				100	100	100	100	90	70	NA	50	50	
10 GHz (Plane Wave)				100	100	100	100	90	70	NA	30	30	
ELECTRICAL STABILITY DURING VIBRATION (Ω-CM)	DURING	MAX	MIL-DTL-83528C	.100	0.015	.100	NA	NA	0.01	NA	NA	NA	
	AFTER			.100	0.012	.100	NA	NA	0.002	NA	NA	NA	
ELECTRICAL STABILITY AFTER BREAK	(Ω-CM)	MAX	MIL-DTL-83528C	.100	0.012	.100	NA	NA	0.01	N/A	NA	NA	
UPPER TEMPERATURE	(°C)	MAX	ASTM D1329	+125	+160	+125	+125	+160	+160	+125	+160	+160	
LOW TEMP FLEX (°C)	TR10	MIN	ASTM D1329	-55	-55	-55	-55	-55	-65	N/A	-55	-55	
	TR70			-55	-55	-40	-40	-40	-40	N/A	-40	-55	
VOLUME RESISTIVITY (after life testing)	(Ω-CM)	MAX	MIL-DTL-83528C	0.100	0.015	0.015	NA	NA	0.01	NA	NA	5.00	
VOLUME RESISTIVITY AFTER ELECTROMAGNETIC PULSE (EMP) EXPOSURE	(Ω-CM)	MAX	MIL-DTL-83528C	.100	0.015	0.015	NA	NA	0.01	NA	NA	NA	
FLUID CHARACTERISTICS													
FLUID IMMERSION	-	-	MIL-DTL-83528C	N/S	N/S	SUR	NA	NA	SUR	N/S	N/S	N/S	