

# eSHIELD RUBBERCON ELASTOMERS



## MATERIAL DATA SHEET

MATERIAL: SILVER-PLATED COPPER FILLED SILICONE  
 (Ag/Cu Silicone)

Compound #	ECR-101	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	200
Elongation	ASTM D412	%	Min/Max	100/300
Tear Strength	ASTM D624	ppi	Min	25
Hardness	ASTM D2240	Shore A	±7	65
Specific Gravity	ASTM D792	g/cc	±.25	3.50
Compression/Deflection	ASTM D575	%	Min	3.5
Compression Set	ASTM D395	%	Max	32
Upper Temperature	MIL-DTL-83528C	°C	Max	+125
Lower Temperature	ASTM D1329	°C	Max	-55
Fluid Immersion	MIL-DTL-83528C	---	---	NOT SURVIVE
Volume Resistivity				
As Received	MIL-DTL-83528C	Ω-cm	Max	.004
After Life Testing				.010
After Break				.008
During Vibration				.006
After Vibration				.004
After EMP Exposure				.010
Shielding Effectiveness				
200 KHz	MIL-DTL-83528C	dB	Min	115
100 MHz				113
500 MHz				117
2 GHz				125
10 GHz				114

## eSHIELD RUBBERCON ELASTOMERS



### MATERIAL DATA SHEET

MATERIAL: SILVER-PLATED ALUMINUM FILLED SILICONE  
 (Ag/Al Silicone)

Compound #	ECR-102	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	200
Elongation	ASTM D412	%	Min/Max	100/300
Tear Strength	ASTM D624	ppi	Min	30
Hardness	ASTM D2240	Shore A	±7	65
Specific Gravity	ASTM D792	g/cc	±.25	2.00
Compression/Deflection	ASTM D575	%	Min	3.5
Compression Set	ASTM D395	%	Max	32
Upper Temperature	MIL-DTL-83528C	°C	Max	+160
Lower Temperature	ASTM D1329	°C	Max	-55
Fluid Immersion	MIL-DTL-83528C	---	---	NOT SURVIVE
Volume Resistivity				
As Received	MIL-DTL-83528C	Ω-cm	Max	.008
After Life Testing				.010
After Break				.015
During Vibration				.012
After Vibration				.008
After EMP Exposure				.010
Shielding Effectiveness				
200 KHz	MIL-DTL-83528C	dB	Min	115
100 MHz				105
500 MHz				112
2 GHz				123
10 GHz				114

## eSHIELD RUBBERCON ELASTOMERS



### MATERIAL DATA SHEET

MATERIAL: SILVER COATED COPPER FILLED F.SILICONE  
 (Ag/Cu F.Silicone)

Compound #	ECR-103	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	180
Elongation	ASTM D412	%	Min/Max	100/300
Tear Strength	ASTM D624	ppi	Min	35
Hardness	ASTM D2240	Shore A	±7	75
Specific Gravity	ASTM D792	g/cc	±.25	4.00
Compression/Deflection	ASTM D575	%	Min	3.5
Compression Set	ASTM D395	%	Max	35
Upper Temperature	MIL-DTL-83528C	°C	Max	+125
Lower Temperature	ASTM D1329	°C	Max	-55/-40
Fluid Immersion	MIL-DTL-83528C	---	---	SURVIVE
Volume Resistivity				
As Received	MIL-DTL-83528C	Ω-cm	Max	.010
After Life Testing				.015
After Break				.015
During Vibration				.015
After Vibration				.010
After EMP Exposure				.015
Shielding Effectiveness				
200 KHz	MIL-DTL-83528C	dB	Min	
100 MHz				
500 MHz				
2 GHz				
10 GHz				

## eSHIELD RUBBERCON ELASTOMERS



### MATERIAL DATA SHEET

MATERIAL: SILVER-PLATED ALUMINUM FILLED F.SILICONE  
 (Ag/Al F.Silicone)

Compound #	ECR-104	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	180
Elongation	ASTM D412	%	Min/Max	60/260
Tear Strength	ASTM D624	ppi	Min	35
Hardness	ASTM D2240	Shore A	±7	70
Specific Gravity	ASTM D792	g/cc	±.25	2.00
Compression/Deflection	ASTM D575	%	Min	3.5
Compression Set	ASTM D395	%	Max	30
Upper Temperature	MIL-DTL-83528C	°C	Max	+160
Lower Temperature	ASTM D1329	°C	Max	-55/-40
Fluid Immersion	MIL-DTL-83528C	---	---	SURVIVE
Volume Resistivity				
As Received	MIL-DTL-83528C	Ω-cm	Max	.012
After Life Testing				.015
After Break				.015
During Vibration				.015
After Vibration				.012
After EMP Exposure				.015
Shielding Effectiveness				
200 KHz	MIL-DTL-83528C	dB	Min	
100 MHz				
500 MHz				
2 GHz				
10 GHz				

# eSHIELD RUBBERCON ELASTOMERS



## MATERIAL DATA SHEET

MATERIAL: PURE SILVER SILICONE  
 (Ag Silicone)

Compound #	ECR-105	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	300
Elongation	ASTM D412	%	Min/Max	200/500
Tear Strength	ASTM D624	ppi	Min	50
Hardness	ASTM D2240	Shore A	±7	65
Specific Gravity	ASTM D792	g/cc	±.25	3.5
Compression/Deflection	ASTM D575	%	Min	2.5
Compression Set	ASTM D395	%	Max	45
Upper Temperature	MIL-DTL-83528C	°C	Max	+160
Lower Temperature	ASTM D1329	°C	Max	-55/-40
Fluid Immersion	MIL-DTL-83528C	---	---	NOT SURVIVE
<b>Volume Resistivity</b>				
As Received	MIL-DTL-83528C	Ω-cm	Max	.002
After Life Testing				.010
After Break				.010
During Vibration				.010
After Vibration				.002
After EMP Exposure				.010
<b>Shielding Effectiveness</b>				
200 KHz	MIL-DTL-83528C	dB	Min	118
100 MHz				131
500 MHz				130
2 GHz				133
10 GHz				113

## eSHIELD RUBBERCON ELASTOMERS



### MATERIAL DATA SHEET

MATERIAL: PURE SILVER F. SILICONE  
 (Ag F. Silicone)

Compound #	ECR-106	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	250
Elongation	ASTM D412	%	Min/Max	100/300
Tear Strength	ASTM D624	ppi	Min	40
Hardness	ASTM D2240	Shore A	±7	75
Specific Gravity	ASTM D792	g/cc	±.25	4.00
Compression/Deflection	ASTM D575	%	Min	3.5
Compression Set	ASTM D395	%	Max	60
Upper Temperature	MIL-DTL-83528C	°C	Max	+160
Lower Temperature	ASTM D1329	°C	Max	-65/-40
Fluid Immersion	MIL-DTL-83528C	---	---	SURVIVE
Volume Resistivity				
As Received	MIL-DTL-83528C	Ω-cm	Max	.002
After Life Testing				.010
After Break				.010
During Vibration				.010
After Vibration				.002
After EMP Exposure				.010
Shielding Effectiveness				
200 KHz	MIL-DTL-83528C	dB	Min	
100 MHz				
500 MHz				
2 GHz				
10 GHz				

## eSHIELD RUBBERCON ELASTOMERS



### PRODUCT DATA SHEET

MATERIAL: SILVER COATED COPPER FILLED EXPANDED  
 COPPER MESH REINFORCED SILICONE

Compound #	ECR-107	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	600
Elongation	ASTM D412	%	Min/Max	20 MIN
Tear Strength	ASTM D624	ppi	Min	70
Hardness	ASTM D2240	Shore A	±7	80
Specific Gravity	ASTM D792	g/cc	±.25	4.75
Compression/Deflection	ASTM D575	%	Min	2.5
Compression Set	ASTM D395	%	Max	N/A
Upper Temperature	MIL-DTL-83528C	°C	Max	125
Lower Temperature	ASTM D1329	°C	Max	-45
Fluid Immersion	MIL-DTL-83528C	---	---	NOT SURVIVE
Volume Resistivity				
As Received	MIL-DTL-83528C	Ω-cm	Max	.007
After Life Testing				.010
After Break				N/A
During Vibration				0.010
After Vibration				.007
After EMP Exposure				0.010
Shielding Effectiveness				
200 KHz	MIL-DTL-83528C	dB	Min	115
100 MHz				131
500 MHz				140
2 GHz				124
10 GHz				112

# eSHIELD RUBBERCON ELASTOMERS



## PRODUCT DATA SHEET

MATERIAL: SILVER COATED COPPER FILLED H.D SILICONE  
 (Ag/Cu HD Silicone)

Compound #	ECR-110	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	400
Elongation	ASTM D412	%	Min/Max	100/300
Tear Strength	ASTM D624	ppi	Min	40
Hardness	ASTM D2240	Shore A	±7	85
Specific Gravity	ASTM D792	g/cc	±.25	3.5
Compression/Deflection	ASTM D575	%	Min	2.5
Compression Set	ASTM D395	%	Max	35
Upper Temperature	MIL-DTL-83528C	°C	Max	+125
Lower Temperature	ASTM D1329	°C	Max	-45/-35
Fluid Immersion	MIL-DTL-83528C	---	---	NOT SURVIVE
<b>Volume Resistivity</b>				
As Received	MIL-DTL-83528C	Ω-cm	Max	.005
After Life Testing				.010
After Break				.010
During Vibration				.010
After Vibration				.005
After EMP Exposure				.010
<b>Shielding Effectiveness</b>				
200 KHz	MIL-DTL-83528C	dB	Min	114
100 MHz				132
500 MHz				120
2 GHz				113
10 GHz				124



# eSHIELD RUBBERCON ELASTOMERS



## MATERIAL DATA SHEET

MATERIAL: SILVER COATED NICKEL FILLED SILICONE  
 (Ag/Ni Silicone)

Compound #	ECR-111	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	200
Elongation	ASTM D412	%	Min/Max	100/300
Tear Strength	ASTM D624	ppi	Min	30
Hardness	ASTM D2240	Shore A	±7	75
Specific Gravity	ASTM D792	g/cc	±.25	4.0
Compression/Deflection	ASTM D575	%	Min	3.5
Compression Set	ASTM D395	%	Max	32
Upper Temperature	MIL-DTL-83528C	°C	Max	+125
Lower Temperature	ASTM D1329	°C	Max	-55/-55
Fluid Immersion	MIL-DTL-83528C	---	---	NOT SURVIVE
<b>Volume Resistivity</b>				
As Received	MIL-DTL-83528C	Ω-cm	Max	.005
After Life Testing				.010
After Break				.010
During Vibration				.010
After Vibration				.005
After EMP Exposure				.010
<b>Shielding Effectiveness</b>				
200 KHz	MIL-DTL-83528C	dB	Min	120
100 MHz				126
500 MHz				135
2 GHz				132
10 GHz				112

## eSHIELD RUBBERCON ELASTOMERS



### MATERIAL DATA SHEET

MATERIAL: SILVER COATED GLASS FILLED SILICONE  
 (Ag/Glass Silicone)

Compound #	ECR-112	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	200
Elongation	ASTM D412	%	Min/Max	100/300
Tear Strength	ASTM D624	ppi	Min	30
Hardness	ASTM D2240	Shore A	±7	65
Specific Gravity	ASTM D792	g/cc	±.25	1.90
Compression/Deflection	ASTM D575	%	Min	3.5
Compression Set	ASTM D395	%	Max	30
Upper Temperature	MIL-DTL-83528C	°C	Max	+160
Lower Temperature	ASTM D1329	°C	Max	-55/-55
Fluid Immersion	MIL-DTL-83528C	---	---	NOT SURVIVE
Volume Resistivity				
As Received	MIL-DTL-83528C	Ω-cm	Max	.006
After Life Testing				.015
After Break				.009
During Vibration				.009
After Vibration				.006
After EMP Exposure				.015
Shielding Effectiveness				
200 KHz	MIL-DTL-83528C	dB	Min	118
100 MHz				131
500 MHz				138
2 GHz				132
10 GHz				112

# eSHIELD RUBBERCON ELASTOMERS



## MATERIAL DATA SHEET

MATERIAL: NICKEL COATED GRAPHITE FILLED SILICONE

Compound #	ECR-213	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	200
Elongation	ASTM D412	%	Min/Max	100/300
Tear Strength	ASTM D624	ppi	Min	35
Hardness	ASTM D2240	Shore A	±7	60
Specific Gravity	ASTM D792	g/cc	±.25	2.00
Compression/Deflection	ASTM D575	%	Min	3.5
Compression Set	ASTM D395	%	Max	30
Upper Temperature	MIL-DTL-83528C	°C	Max	150
Lower Temperature	ASTM D1329	°C	Max	-55
Fluid Immersion	MIL-DTL-83528C	---	---	NOT SURVIVE
<b>Volume Resistivity</b>				
As Received	MIL-DTL-83528C	Ω-cm	Max	.100
After Life Testing				.100
After Break				.100
During Vibration				.100
After Vibration				.100
After EMP Exposure				.100
<b>Shielding Effectiveness</b>				
200 KHz	MIL-DTL-83528C	dB	Min	110
100 MHz				130
500 MHz				131
2 GHz				126
10 GHz				112

# eSHIELD RUBBERCON ELASTOMERS



## MATERIAL DATA SHEET

MATERIAL: NICKEL COATED GRAPHITE FILLED F. SILICONE

Compound #	ECR-215	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	190
Elongation	ASTM D412	%	Min/Max	60/260
Tear Strength	ASTM D624	ppi	Min	35
Hardness	ASTM D2240	Shore A	±7	70
Specific Gravity	ASTM D792	g/cc	±.25	2.20
Compression/Deflection	ASTM D575	%	Min	3.0
Compression Set	ASTM D395	%	Max	30
Upper Temperature	MIL-DTL-83528C	°C	Max	150
Lower Temperature	ASTM D1329	°C	Max	-45
Fluid Immersion	MIL-DTL-83528C	---	---	SURVIVE
<b>Volume Resistivity</b>				
As Received	MIL-DTL-83528C	Ω-cm	Max	.100
After Life Testing				.100
After Break				.100
During Vibration				.100
After Vibration				.100
After EMP Exposure				.100
<b>Shielding Effectiveness</b>				
30 MHz	MIL-DTL-83528C	dB	Min	117
100 MHz				132
400 MHz				110
2 GHz				111
10 GHz				107

# eSHIELD RUBBERCON ELASTOMERS



## MATERIAL DATA SHEET

MATERIAL: SILVER COATED NICKEL FILLED EPDM

Compound #	ECR-216	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	200
Elongation	ASTM D412	%	Min/Max	100/300
Tear Strength	ASTM D624	ppi	Min	50
Hardness	ASTM D2240	Shore A	±7	75
Specific Gravity	ASTM D792	g/cc	±.25	3.7
Compression/Deflection	ASTM D575	%	Min	2.0
Compression Set	ASTM D395	%	Max	40
Upper Temperature	MIL-DTL-83528C	°C	Max	125
Lower Temperature	ASTM D1329	°C	Max	-40
Fluid Immersion	MIL-DTL-83528C	---	---	NOT SURVIVE
<b>Volume Resistivity</b>				
As Received	MIL-DTL-83528C	Ω-cm	Max	.010
After Life Testing				N/A
After Break				N/A
During Vibration				N/A
After Vibration				N/A
After EMP Exposure				N/A
<b>Shielding Effectiveness</b>				
200 KHz	MIL-DTL-83528C	dB	Min	115
100 MHz				132
500 MHz				130
2 GHz				135
10 GHz				112

# eSHIELD RUBBERCON ELASTOMERS



## PRODUCT DATA SHEET

MATERIAL: SILVER COATED ALUMINUM FILLED EPDM  
 Ag/AI EPDM

Compound #	ECR-217	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	200
Elongation	ASTM D412	%	Min/Max	100/300
Tear Strength	ASTM D624	ppi	Min	50
Hardness	ASTM D2240	Shore A	±7	75
Specific Gravity	ASTM D792	g/cc	±.25	1.90
Compression/Deflection	ASTM D575	%	Min	2.0
Compression Set	ASTM D395	%	Max	40
Upper Temperature	MIL-DTL-83528C	°C	Max	125
Lower Temperature	ASTM D1329	°C	Max	-40
Fluid Immersion	MIL-DTL-83528C	---	---	NOT SURVIVE
Volume Resistivity				
As Received	MIL-DTL-83528C	Ω-cm	Max	.010
After Life Testing				N/A
After Break				N/A
During Vibration				N/A
After Vibration				N/A
After EMP Exposure				N/A
Shielding Effectiveness				
200 KHz	MIL-DTL-83528C	dB	Min	115
100 MHz				132
500 MHz				137
2 GHz				130
10 GHz				111

# eSHIELD RUBBERCON ELASTOMERS



## MATERIAL DATA SHEET

**MATERIAL: NICKEL COATED GRAPHITE FILLED EPDM  
 (Ni/C EPDM)**

Compound #	ECR-218	
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Physical Property	Test Method	Unit	Tolerance	Data
Tensile	ASTM D412	psi	Min	200
Elongation	ASTM D412	%	Min/Max	100/300
Tear Strength	ASTM D624	ppi	Min	50
Hardness	ASTM D2240	Shore A	±7	75
Specific Gravity	ASTM D792	g/cc	±.25	2.00
Compression/Deflection	ASTM D575	%	Min	2.0
Compression Set	ASTM D395	%	Max	40
Upper Temperature	MIL-DTL-83528C	°C	Max	125
Lower Temperature	ASTM D1329	°C	Max	-40
Fluid Immersion	MIL-DTL-83528C	---	---	NOT SURVIVE
Volume Resistivity				
As Received	MIL-DTL-83528C	Ω-cm	Max	.100
After Life Testing				N/A
After Break				N/A
During Vibration				N/A
After Vibration				N/A
After EMP Exposure				N/A
Shielding Effectiveness				
200 KHz	MIL-DTL-83528C	dB	Min	117
100 MHz				130
500 MHz				120
2 GHz				113
10 GHz				114