



CHO-SEAL® 1285R AND 1287R REINFORCED CONDUCTIVE ELASTOMER SEALS

CHO-SEAL® 1285R and 1287R materials are fabric-reinforced, silver-plated-aluminum filled EMI seals for airframe shielding applications. These seal materials can also be used to maintain surface electrical continuity at joints, seams and openings for radar cross section reduction.

Both CHO-SEAL materials are physically reinforced with Dacron fabric to withstand high levels of wear and abuse. They are lightweight and more corrosion resistant than other EMI seal materials in contact with aluminum. CHO-SEAL 1287R is based on a fluorosilicone elastomer which is resistant to jet fuels, hydraulic fluids and most solvents. CHO-SEAL 1285R is a silicone and offers slightly higher overall levels of EMI shielding effectiveness.

CHO-SEAL 1285R and 1287R seals retain their electrical properties in vibration and EMP conditions. Aging qualities are exceptional due to the excellent stability of the silver-plated-aluminum filler particles over a use temperature range of -55°C to 160°C.

(For application against aluminum skins or structures in salt fog environments, Chomerics recommends that mating flange surfaces be protected with CHO-SHIELD® 2001 or 2002 conductive coatings for maximum corrosion protection.)

Because these elastomer seals contain small amounts of silver, they should be stored in sheet plastic, such as polyester or polyethylene, and kept away from sulfur-containing materials such as sulfur-cured neoprene or cardboard. Exposure to high sulfur environments can result in an increase in resistivity.

CHO-SEAL 1285R and 1287R seals are available in a wide range of closely toleranced shapes and configurations. Sheet stock is available for evaluation of properties.

TYPICAL PROPERTIES

Test Procedures	CHO-SEAL 1285R		CHO-SEAL 1287R			
	Base Material	Reinforced Material	Base Material	Reinforced Material		
Grade	Military-Aerospace	Military-Aerospace	Military-Aerospace	Military-Aerospace		
Elastomer Binder	Silicone	Silicone	Fluorosilicone	Fluorosilicone		
Conductive Filler	Ag/Al	Ag/Al	Ag/Al	Ag/Al		
Volume Resistivity (ohm-cm, max.)	MIL-G-83528 (Para. 4.6.11) (Q/C)	0.008	0.008 ¹	0.012	0.012 ¹	
Hardness (Shore A±B)	ASTM D2240 (Q/C)	65	N/A	75	N/A	
Specific Gravity (±0.25)	ASTM D792 (Q/C)	1.9	1.85	2.0	1.95	
Tensile Strength psi, min. (MPa)	ASTM D412 (Q/C)	200 (1.38)	650 (4.48) (Warp) 350 (2.41) (Fill)	180 (1.24)	650 (4.48) (Warp) 350 (2.41) (Fill)	
Elongation (percent, min.)	ASTM D412 (Q/C)	100	50 (Warp) 50 (Fill)	100	50 (Warp) 50 (Fill)	
Tear Strength lb/in, min. (N/m)	ASTM D624 (Q/C)	30 (5,250)	200 (35,000) (Warp) 200 (35,000) (Fill)	35 (6,125)	175 (30,625) (Warp) 175 (30,625) (Fill)	
Compression Set, 70 hrs. @ 100°C (% , max.)	ASTM D395 Method B (Q)	32	N/A	35	N/A	
Low Temp. Flex, TR10 (°C, min.)	ASTM D1339 (Q)	-65	-65	-55	-55	
Max. Continuous Use Temp. (°C)	(Q)	160	160	125	125	
Shielding Effectiveness (dB, min.)	MIL-G-83528 Para. 4.6.12 (Q)	200 kHz (H Field)	60	60	55	55
		100 MHz (E Field)	115	115	110	110
		500 MHz (E Field)	110	110	100	100
		2 GHz (Plane Wave)	105	105	95	95
		10 GHz (Plane Wave)	100	100	90	90
Heat Aging (ohm-cm, max.)	MIL-G-83528 Para. 4.6.15 (Q/C)	0.010	0.010	0.015	0.015	
Vibration Resistance (ohm-cm, max.)	MIL-G-83528 (Q) Para. 4.6.13 (Q)	During 0.012 After 0.008	During 0.012 After 0.008	During 0.015 After 0.012	During 0.015 After 0.012	
Post Tensile Strength Vol. Resistivity (ohm-cm, max.)	MIL-G-83528 Para. 4.6.9 (Q/C)	0.015	N/A	0.015	N/A	
EMP Survivability (kA per in. perimeter)	MIL-G-83528 Para. 4.6.16 (Q)	>0.9	>0.9	>0.9	>0.9	

Q = Qualification

C = QC Conformance

¹Pressure Probe Method per MIL-G-83528, Paragraph 4.6.10.



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