

CHO-SEAL 1285

CONDUCTIVE ELASTOMER WITH IMPROVED CORROSION RESISTANCE

CHO-SEAL 1285 conductive silicone elastomer features improved corrosion resistance in salt spray environments over silver-plated aluminium-filled silicone. In addition to being more corrosion resistant, the 1285 elastomer is lighter in weight than other conductive elastomers.

Shielding performance is within 10dB of the best silver-copper materials at 1 GHz, and in many instances is equivalent to silver-aluminium in shielding performance.

CHO-SEAL 1285 elastomer is recommended when system shielding specifications are up to 90dB at 1 GHz. It is a medium durometer silicone with excellent low and high temperature properties and electrical stability.

This is because of its exceptional aging characteristics and improved corrosion resistance.

CHO-SEAL 1285 elastomer contributes to overall system maintainability. For the highest performance corrosion resistant material, use CHO-SEAL 1298.

Although corrosion resistance is better than that of the silver-copper or pure silver filled elastomers, 1285 elastomer is not recommended for use on external aluminium aircraft structure or in shipboard deck environments requiring compatibility against aluminium. For such applications, CHO-SEAL 1298 elastomer and CHO-SEAL 2000 series flange protection coatings are recommended.



Property	Test procedure (type of test)	CHO-SEAL 1285
Molded (M) or Extruded (E)	--	M/E
Conductive Filler	--	Ag/Al
Elastomer Binder	--	Silicone
Type (Ref. MIL-DTL-83528)	--	Type B
Volume Resistivity, ohm-cm, max., as supplied without pressure sensitive adhesive	CEPS-0002 (Q/C)	Not Applicable
	MIL-DTL-83528 (Q/C)	0.008
Hardness, Shore A	ASTM D2240 (Q/C)	65 ± 7
Specific Gravity	ASTM D792 (Q/C)	2.00 ± 0.25
Tensile Strength, psi (MPa), min.	ASTM D412 (Q/C)	200 (1.38)
Elongation, % min. or % min./max.	ASTM D412 (Q/C)	100/300
Tear Strength, lb/in. (kN/m), min.	ASTM D624 (Q)	30 (5.25)
Compression Set, 70 hrs at 100°C, % max. ^A	ASTM D395, Method B (Q)	32
Low Temperature Flex TR10, °C, min.	ASTM D1329 (Q)	-65
Maximum Continuous Use Temperature, °C ^B	--	160/200
Thermal Conductivity, W/m-K (Typical) 300 psi (2.07 MPa)	ASTM D5470	2.2

Aging qualities of the 1285 conductive elastomer are excellent because the silver-plated aluminium filler particle is extremely stable in air, moisture and high temperatures and the silicone elastomer is fully cross linked. As the material contains silver, packaging and storage conditions should be similar to those for other silver containing components, such as relays or switches. They should be stored in sheet plastic, such as polyester or polyethylene and kept away from materials such as sulphur-cured neoprene, cardboard, etc. To remove dirt, clean with water or alcohol containing mild soap. (Do not use aromatic or chlorinated solvents).

CHO-SEAL 1285 is available in sheet, die cut, solid, hollow and molded extrusion form. It can also be vulcanised directly onto cover panels. For details on standard sizes and shapes contact HITEK Electronic Materials Ltd.



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Shielding Effectiveness, dB, min. E	Method 1: CHO-TM-TP08 $C(Q)$	Method 2
200 kHz (H Field)		60
100 MHz (E Field)	Method 2: MIL-DTL-83528 Para. 4.6.12 (Q)	115
500 MHz (E Field)		110
2 GHz (Plane Wave)	Method 3: CHO-TM-TP09 $C(Q)$	105
10 GHz (Plane Wave)		100
40 GHz (Plane Wave)		Not Tested
Electrical Stability, ohm-cm, max.		
Heat Aging	CEPS-0002 $C(Q)$	Not Applicable
	MIL-DTL-83528 Para 4.6.15 (Q/C)	0.010
Resistance During Vibration	MIL-DTL-83528 Para 4.6.13 (Q)	0.012
Resistance After Vibration	MIL-DTL-83528 Para 4.6.13 (Q)	0.008
Post Tensile Set Volume Resistivity	MIL-DTL-83528 Para 4.6.9 (Q/C)	0.015
EMP Survivability, kA per in. perimeter	MIL-DTL-83528 Para 4.6.16 (Q)	>0.9
RoHS Compliant	--	Yes
UL 94 Flammability Rating	--	Not Tested

Sheet thickness'

0.51mm (0.020")
0.81mm (0.032")
1.14mm (0.045")
1.57mm (0.062")
2.36mm (0.093")
3.18mm (0.125")

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