

CHO-SEAL® Aerospace-200 Grade Conductive Silicone

CHO-SEAL® Aerospace-200 grade sheet stock materials are highly conductive elastomers which provide both RF suppression and pressure retention. These materials consist of Chomerics' "essential silver" powders dispersed in silicone or fluorosilicone binders. They are resilient, homogeneous composites manufactured from virgin components of the highest quality, and are also available in die-cut and molded shapes.

Aerospace-200 grade materials are characterized by exceptional heat stability, maintaining their electrical properties at continuous-use temperatures up to 200°C. They also meet NASA out-gassing specifications. Variations in chemical or physical properties make each material in this grade specifically suited for certain applications.

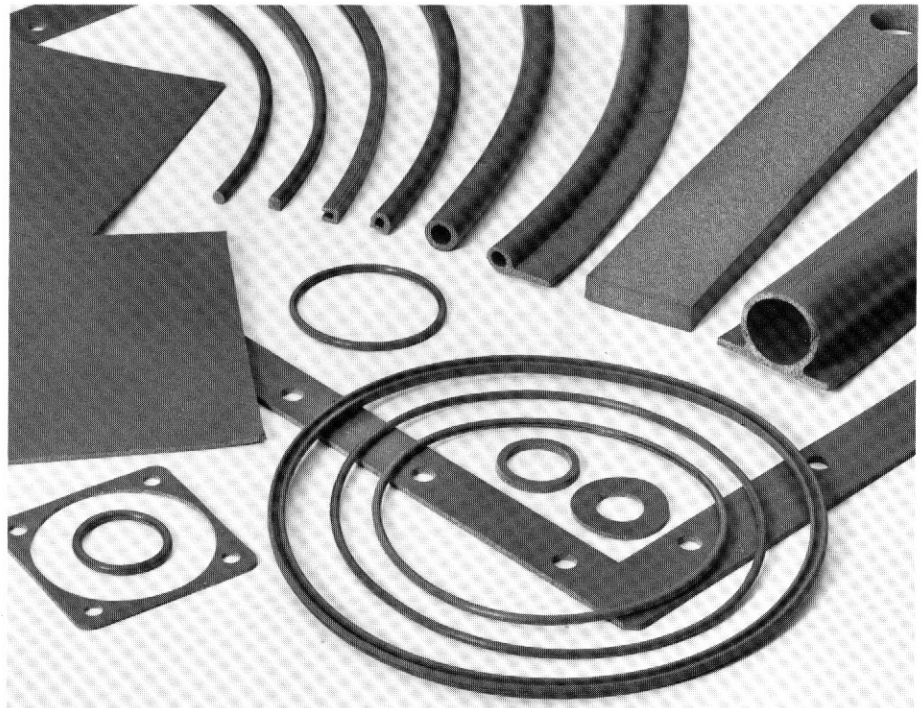
CHO-SEAL® 1221 – a fluorosilicone intended for use where solvent, oil, or jet-fuel compatibility is required.

CHO-SEAL® 1224 – a medium durometer silicone material.

CHO-SEAL conductive elastomers are chemically inert, and will resist the effects of most corrosive atmospheres. Where pure silver-filled CHO-SEAL materials are in contact with a dissimilar metal in a corrosive environment, coating or edge sealing of the mating surfaces may be required. (For best corrosion resistance, CHO-SEAL 1285, 1298 and 1287 are recommended. Refer to Technical Bulletins 58, 19 and 18.)

CHO-SEAL materials are not nutrients for fungus or microorganisms, and will not support their growth. They are moisture resistant, even at high temperatures.

Aerospace-200 grade sheet stock is available in standard thicknesses of



0.031 in. (0.79 mm), 0.062 in. (1.57 mm), 0.093 in. (2.36 mm) and 0.125 in. (3.18 mm); and dimensions of 10 in. x 10 in. (25.4 cm x 25.4 cm), 10 in. x 15 in. (25.4 cm x 38.1 cm), 20 in. x 15 in. (50.8 cm x 38.1 cm) and 30 in. x 20 in. (76.2 cm x 50.8 cm). Standard "D" and "O" rings, as well as extruded strips of various cross sections, are also available.

Unique advantages over other methods of EMI shielding and sealing include:

Heat Stability – When used within the recommended range of continuous-use temperatures, CHO-SEAL Aerospace-200

grade materials provide totally reliable shielding and sealing.

Reuseability – They retain their original shape if compressed within recommended limits.

Non scarring – They contain no metal wires or knurled surfaces to break or scar mating flanges.

Conformability – They conform to uneven or rough surfaces.

continued

SPECIFICATIONS		Test Procedure	CHO-SEAL 1224	CHO-SEAL 1221
Type (Ref. MIL-G-83528)			Type E	Type F
Elastomer Binder			Silicone	Fluorosilicone
Conductive Filler			Ag	Ag
Volume Resistivity (ohm-cm, max.) as supplied (without psa)		MIL-G-83528 Para. 4.6.11	0.002	0.002
Durometer (Shore A ±5)		ASTM D2240	65	75
Specific Gravity (±0.25)		ASTM D792	3.4	4.0
Tensile Strength (psi, min.)		ASTM D412	300	250
Elongation (percent, min./max.)		ASTM D412	200 / 500	100 / 300
Tear Strength (lb./in. min.)		ASTM D624	60	40
Compression Set 70 hrs @ 100°C (percent, max.)*		ASTM D395 Method B	45	60
Low Temperature Flex, TR10 (°C, min.)		ASTM D1329	-65	-65
Maximum Continuous Use Temperature (°C)**			160 / 200*	160 / 200*
Shielding Effectiveness	200 kHz (H Field)	MIL-G-83528 Para. 4.6.12	70	70
	100 MHz (E Field)		120	120
	500 MHz (E Field)		120	120
	2 GHz (Plane Wave)		120	120
	10 GHz (Plane Wave)		120	120
Electrical Stability	Heat Aging	MIL-G-83528 Para. 4.6.15	0.010	0.010
	Vibration Resistance	During	0.010	0.010
		After	0.002	0.02
	Post Tensile Set Volume Resistivity	MIL-G-83528 Para. 4.6.9	0.010	0.010
EMP Survivability (kA per in. perimeter)	MIL-G-83528 Para. 4.6.16	>0.9	>0.9	

* Compression set is expressed as a percentage of deflection per ASTM D395 Method B, at 25% deflection. To determine percent recovery, subtract 3/4 of stated compression set value from 100%. For example, in the case of 30% compression set, recovery is 92.5%.

** Where two values are shown, the first represents maximum operation temperature for conformance to MIL-G-83528 (which requires Group A life testing at 1.25 times maximum operation test). Second value represents practical limits for exposure up to 1000 hours (compressed between flanges 7-10%).

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