CHO-SEAL® 1298 & 1299

Silver-Aluminum Filled Elastomer EMI Shielding Gasket in a Fluorosilicone Binder

Parker Chomerics' CHO-SEAL 1298 is a high-performance EMI shielding gasket made from a passivated silver-aluminum filled elastomer in a fluorosilicone binder. This cutting-edge material delivers outstanding shielding effectiveness and surpasses most conductive elastomers with its superior corrosion resistance, ensuring long-lasting, reliable performance in demanding environments. This unique combination makes it suitable for a wide range of applications. Available in both molded and extruded forms with a variety of custom profiles, CHO-SEAL 1298 offers design and manufacturing flexibility to meet diverse project requirements.

Parker Chomerics' CHO-SEAL 1299 is a softer molded only version of CHO-SEAL 1298. Although not a MIL-DTL-83528 certified material, it continues to provide the same shielding effectiveness and corrosion resistance performance as the market leading CHO-SEAL 1298 - but with a hardness of 45 Shore A. Available in sheet form and custom molded solutions.

Product Features

- High shielding effectiveness
- Passivated silver-plated aluminum particles provide increased corrosion resistance against aluminum
- Fluorosilicone provides resistance to harsh chemicals
- Higher temperature limit than most conductive fluorosilicones
- Optionally supplied with a thin electrically conductive, pressure-sensitive acrylic adhesive (PSA) backing
- CHO-SEAL 1298 meets MIL-DTL-83528 Type D Specifications
- CHO-SEAL 1298 available in extruded or molded custom solutions
- CHO-SEAL 1299 available in custom molded solutions

Typical Applications

- Man-portable electronics
- Military communication modules
- Unmanned Aerial Vehicles (UAVs)
- Naval and shipboard electronics
- Robotics equipment
- Connector interface seals

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CHO-SEAL® 1298 &1299 PRODUCT INFORMATION

	Typical Properties†	1298	1299	Test Methods
Physical	Molded (M) or Extruded (E)	M/E	M	--
	Conductive Filler	Passivated Ag/Al	Passivated Ag/Al	--
	Elastomer Binder	Fluorosilicone	Fluorosilicone	--
	Type (Ref. MIL-DTL-83528)	Type D	--	--
	Volume Resistivity, ohm-cm, max., without pressure sensitive adhesive	Not Applicable	0.080	CEPS-0002[C] (Q/C)
		0.012	Not Applicable	MIL-DTL-83528 (Q/C)
	Hardness, Shore A	70 ±7	45 ± 7	ASTM D2240 (Q/C)
	Specific Gravity	2.00 ±0.25	1.90 ± 0.25	ASTM D792 (Q/C)
	Tensile Strength, psi (MPa), min.	180 (1.24)	125 (0.86)	ASTM D412 (Q/C)
	Elongation, % min. or % min./max.	60/260	100	ASTM D412 (Q/C)
	Tear Strength, lb/in. (kN/m), min.	35 (6.13)	30 (2.25)	ASTM D624 (Q)
	Compression Set, 70 hrs at 100°C, % max.[A]	30	25	ASTM D395, Method B (Q)
Thermal	Low Temperature Flex TR10, °C, min.	-55	-65	ASTM D1329 (Q)
	Maximum Continuous Use Temperature, °C	160/200[B]	200	--
	Thermal Conductivity, W/m-K (Typical) 300 psi (2.07 MPa)	1.2	0.6	ASTM D5470
Electrical	Shielding Effectiveness, dB, min.	Method 2	Method 2	Method 1: CHO-TP08[C] (Q) Method 2: MIL-DTL-83528 Para. 4.5.12 (Q) Method 3: CHO-TP09[C] (Q)
	200 kHz (H Field)	55	Not Tested	
	100 MHz (E Field)	110	128	
	500 MHz (E Field)	100	102	
	2 GHz (Plane Wave)	95	110	
	10 GHz (Plane Wave)	90	122	
	40 GHz (Plane Wave)	75	Not Tested	
	Electrical Stability, ohm-cm, max. Heat Aging	Not Applicable	0.160	CEPS-0002[C] (Q)
		0.015	Not Applicable	MIL-DTL-83528 Para. 4.5.15 (Q/C)
	Resistance During Vibration	0.015	Not Applicable	MIL-DTL-83528 Para. 4.5.13 (Q)
	Resistance After Vibration	0.012	Not Applicable	MIL-DTL-83528 Para. 4.5.13 (Q)
	Post Tensile Set Volume Resistivity	0.015	Not Applicable	MIL-DTL-83528 Para. 4.5.9 (Q/C)
Regulatory	EMP Survivability, kA per in. perimeter	>0.9	Not Applicable	MIL-DTL-83528 Para. 4.5.16 (Q)
	RoHS Compliant	Yes	Yes	--
	Outgassing, % TML (% CVCM)	0.12 (0.02)	0.57 (0.02)	ASTM E595
	UL 94 Flammability Rating	Not Tested	Not Tested	UL 94

Note A: Compression set is expressed as a percentage of deflection per ASTM D395 Method B, at 25% deflection. To determine percent recovery, subtract 0.25 of the stated compression set value from 100%. For example, in the case of 30% compression set, recovery is 92.5%.

Note B: Where two values are shown, the first represents maximum operating temperature for conformance to MIL-DTL-83528 (which requires Group A life testing at 1.25 time maximum operating temperature) and the second value represents the practical limit for exposure up to 1000 hrs. (compressed between flanges 7-10%). Single values conform to both definitions.

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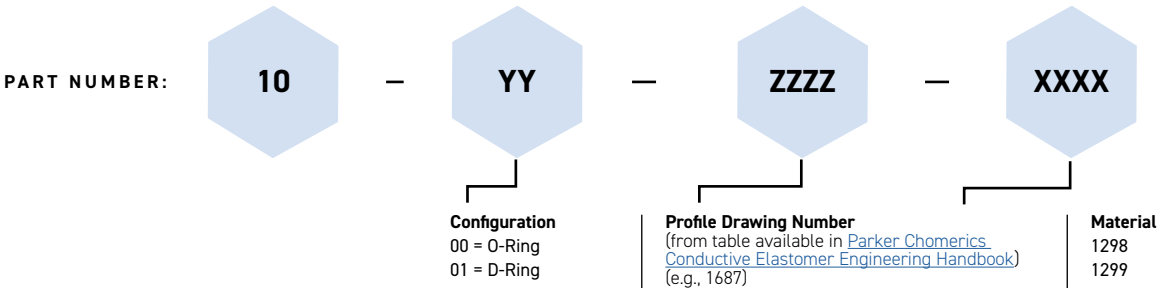
CHO-SEAL® 1298 &1299 MOLDED PART ORDERING

Part Numbering for MOLDED D- AND O-RINGS

Custom options are available for both sheets and die cut parts



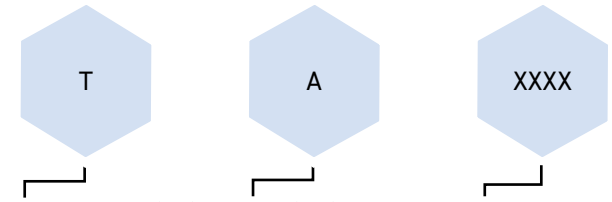
Information on Table 6-7 for standard Molded O-Ring parts is available in the Conductive Elastomer Engineering Handbook. The handbook references Table 6-6 and has overall tolerances on cross-section and inner diameter. Access it at parker.com/chomerics.

Part Numbering for Sheet Stock

STANDARD SHEET STOCK SIZE							
AVAILABILITY BY THICKNESS							
Part Number*	Sheet Size Inches (cm)	0.020 ±0.004 (0.51 ±0.10)	0.032 ±0.005 (0.81 ±0.13)	0.045 ±0.006 (1.14 ±0.15)	0.062 ±0.007 (1.57±0.18)	0.093 ±0.010 (2.36 ±0.25)	0.125 ±0.010 (3.18 ±0.25)
40-TA-1010-XXXX	10 x 10 (25.4 x 25.4)	X	X	X	X	X	X
40-TA-1015-XXXX	10 x 15 (25.4 x 38.1)	X	X	X	X	X	X
40-TA-1020-XXXX	10 x 20 (25.4 x 50.8)	X	X	X	X	X	X
40-TA-2020-XXXX	20 x 20 (50.8 x 50.8)	NA	X	X	X	X	X

X = Available NA = Not Available
*TA refers to thickness and adhesive options.
For sizes other than those shown, change 5th through 8th digits.

Thickness and Adhesive Option Codes



Sheet Thickness in (mm)
1 = 0.020 (0.51)
2 = 0.032 (0.81)
3 = 0.062 (1.57)
4 = 0.093 (2.36)
5 = 0.125 (3.18)
6 = 0.045 (1.14)

Adhesive (PSA)
0 =No Adhesive
1 =Electrically Conductive Pressure-Sensitive Acrylic Adhesive Backing

Material
1298
1299

Die-cut part tolerance table is available in the Conductive Elastomer Engineering Handbook. The handbook references Table 6-2 and has overall tolerances on flat die-cut gaskets, hole diameter, and thickness. Access it at parker.com/chomerics.

Additional Seal & Gasket Types Available

- Waveguide gaskets
- Connector flange gaskets
- Jam nut seals
- Interfacial seals
- Reinforced solutions
- Overmolded solutions
- Co-extrusion & Co-molded solutions

See Conductive Elastomer Engineering Handbook for more information.

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CHO-SEAL® 1298 EXTRUDED ORDERING

Part Numbering for EXTRUDED PRODUCTS - Available for CHO-SEAL 1298 ONLY

Custom Profiles Available

Example: 10-04-1687-1298

PART NUMBER: XX — YY — ZZZZZ — 1298

Extrusion Type
10 = Original Standard Catalog Item
19 = Formerly a custom part, now a catalog item.

Configuration
04 = Round
05 = D-shaped
06 = P-shaped
07 = Rectangular
08 = U-Channel
09 = Custom
18 = Co-extrusion
20 = PSA tape applied
22 = Fabricated cut gasket
24 = Bonded assembly

Profile Drawing Number (from table available in Parker Chomerics Conductive Elastomer Engineering Handbook)
(e.g., 1687)

Typical minimum contiguous extrusion length is 25 feet (7.6 m). Minimum contiguous lengths are contingent on part cross section and material. If specific minimum lengths are requirements, please contact customer service.

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