CHO-SEAL® 1299

Low Durometer EMI Shielding Gasket

Parker Chomerics CHO-SEAL 1299 is an electrically conductive EMI shielding elastomer gasket made from passivated silver-plated aluminum particles in a fluorosilicone binder. CHO-SEAL 1299 features a lower hardness (typically 45 Shore A) compared to many traditional conductive elastomer gaskets, yet it still delivers excellent shielding effectiveness and outstanding corrosion resistance against aluminum. This versatile gasket is available in molded formats, including O-rings, custom molded shapes, and sheet stock for cut gaskets. Suitable for both military and commercial applications, the sheet stock can be precision cut using steel rule die-cutting, X-Y knife cutting, or water jet cutting (without grit) to produce high-quality parts in large quantities.

In addition to CHO-SEAL 1299, Parker Chomerics CHO-SEAL 1298 offers a high-performance EMI shielding solution with a silver-aluminum filled elastomer in a fluorosilicone binder. This gasket provides excellent shielding effectiveness and corrosion resistance, making it ideal for various applications. Available in sheet form and extruded into different profiles, CHO-SEAL 1298 allows for design flexibility. It can be die-cut or water jet cut to create precision parts in large quantities, catering to the needs of both military and commercial sectors.

Product Features

- Low compression force
- High shielding effectiveness
- Excellent corrosion resistance on aluminum
- Resistance to harsh chemicals (fluorosilicone)
- Product available in molded or sheet format
- Higher temperature limit than most conductive fluorosilicones
- Sheets can be provided with an electrically conductive, pressure-sensitive acrylic adhesive (PSA)

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® 1299 PRODUCT INFORMATION

	Typical Properties†	CHO-SEAL 1299	Test Methods
Physical	Molded (M) or Extruded (E)	M	Visual
	Conductive Filler	Passivated Ag/Al	--
	Elastomer Binder	Fluorosilicone	--
	Volume Resistivity, ohm-cm, max., as supplied without electrically conductive pressure-sensitive adhesive	0.080	CEPS-0002
	Hardness, Shore A	45 ± 7	ASTM D2240 (Q/C)
	Specific Gravity	1.90 ± 0.25	ASTM D792 (Q/C)
	Tensile Strength, psi (MPa), min.	125 (0.86)	ASTM D412 (Q/C)
	Elongation, % min. or % min./max.	100	ASTM D412 (Q/C)
	Tear Strength, lb/in. (kN/m), min.	30 (2.25)	ASTM D624 (Q)
	Compression Set, 70 hrs at 100°C, % max.[A]	25	ASTM D395, Method B (Q)
Thermal	Low Temperature Flex TR10, °C, min.	-65	ASTM D1329 (Q)
	Maximum Continuous Use Temperature, °C	200	--
	Thermal Conductivity, W/m-K (Typical) 300 psi (2.07 MPa)	0.6	ASTM D5470
Electrical	Shielding Effectiveness, dB, min.[F]		
	100 MHz (E Field)	128	MIL-DTL-83528 Para. 4.5.12 (Q)
	500 MHz (E Field)	102	
	2 GHz (Plane Wave)	110	
	10 GHz (Plane Wave)	122	
	18 GHz (Plane Wave)	94	
	Heat Aging, 200C for 48 hours, ohm-cm, max.	0.160	CEPS-0002[C] (Q)
	RoHS Compliant	Yes	Chomerics Certification

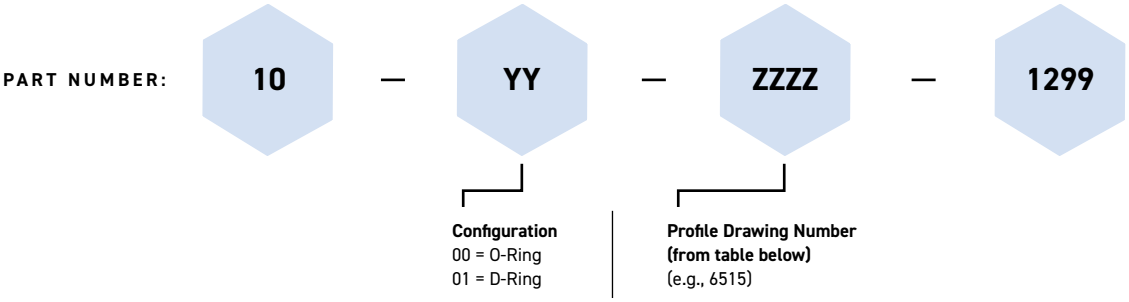
Note A: Compression set is expressed as a percentage of deflection per ASTM D395 Method B, at 25% deflection. To determine percent recovery, subtract 0.25 of the stated compression set value from 100%. For example, in the case of 30% compression set, recovery is 92.5%.

Note C: Copies of CEPS-0002, CHO-TP08 and CHO-TP09 are available from Parker Chomerics. Contact Applications Engineering.

Note F: It may not be inferred that the same level of shielding effectiveness provided by a gasket material tested in the fixture per MIL-DTL-83528 Para. 4.5.12 would be provided in an actual equipment flange, since many mechanical factors of the flange design (tolerances, stiffness, fastener location and size, etc.) could lower or enhance shielding effectiveness. This procedure provides data applicable only to the test fixture design of MIL-DTL-83528, but which is useful for making comparisons between different gasket materials. The 40 GHz test data for all materials uses TP08 test method.

CHO-SEAL® 1299 ORDERING INFORMATION

Part Numbering for MOLDED D- AND O-RINGS



Information on Table 6-7 for standard Molded O-Ring parts is available in the Conductive Elastomer Engineering Handbook on Pages 80 - 81. Page 80 of the handbook references Table 6-6 and has overall tolerances on cross-section and inner diameter. Access it at parker.com/chomerics.

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CHO-SEAL® 1299 ORDERING INFORMATION

STANDARD SHEET STOCK SIZE							
AVAILABILITY BY THICKNESS, inches (mm)							
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-1010-1299	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-1299	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-1299	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-2020-1299	20 x 20 (50.8 x 50.8)	TBD	✓	✓	✓	✓	✓

✓ = 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

T — **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)

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

Die-cut part tolerance table is available in the Conductive Elastomer Engineering Handbook on page 75. Page 75 of 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.

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