

**Conductive Elastomer Selection Guide**

The chart on these pages provides selection guidelines for Chomerics' most general-purpose elastomer EMI gasket materials. With the exception of certain limitations noted under "Remarks", all of these materials are electrically stable over time and provide excellent moisture and pressure sealing. They are all medium-durometer materials and differ mainly in shielding performance and corrosion resistance. (Silver-plated-aluminum

filled materials are significantly more corrosion-resistant than silver-plated-copper and silver-plated-nickel filled materials. Refer to the discussion of CHO-SEAL 1298 Corrosion-Resistant EMI Shielding Gasket on page 32.)

*Note on Gasket Deflection and Closure Force:* We do NOT recommend that material selection be based primarily on hardness. Unlike unfilled elastomers, hardness is not always a good indicator of deflection properties. Gasket shape is generally the most important determinant of deflection under load.

For applications requiring large gasket deflection with minimum closure force, select a hollow strip configuration and/or evaluate the use of Chomerics' SOFT-SHIELD® Low Closure Force Gaskets described in the section starting on page 91.

*Refer to pages 80-86 for Performance Data and discussion of the following topics: Compression-Deflection, Stress Relaxation, Compression Set, EMP Survivability, Vibration Resistance, Heat Aging, Outgassing, and Volume Resistivity Measurement.*

**Table 2**

<b>ELASTOMERS FOR TYPICAL COMMERCIAL APPLICATIONS</b>			
<b>Material</b>	<b>Filler and Binder</b>	<b>Equipment Shielding Requirements (Typ.)</b>	<b>Remarks</b>
CHO-SEAL 1291 (molded) CHO-SEAL 1273	silver-plated copper in silicone	80-105 dB	Material of choice for high-end commercial applications; highest performance material in non-corrosive environments; tear trim compression and injection molding.
CHO-SEAL S6304, S6305, 6370 CHO-SEAL L6303	nickel-coated graphite in silicone  fluorosilicone version	100 dB	Good performance in moderately corrosive environments; material of choice for flange finishes needing "bite-through" for good electrical contact; flame retardant 6370 is UL 94V-0 rated.
CHO-SEAL 1350	silver-plated glass in silicone	80-105 dB	Standard material for high volume injection and compression molding and small extrusions; high performance in non-corrosive environments; moderate physical properties.
CHO-SEAL 1310 (molded) CHO-SIL 1356 (extruded)	silver-plated glass in silicone  silver-plated glass in reticulate silicone	80-100 dB	Moderate performance in non-corrosive environments; no corrosion or fluid resistance; material of choice for small, delicate injection-molded parts or larger extrusions.
<b>ELASTOMERS FOR TYPICAL MILITARY/AEROSPACE APPLICATIONS</b>			
<b>Material</b>	<b>Filler and Binder</b>	<b>Equipment Shielding Requirements (Typ.)</b>	<b>Remarks</b>
CHO-SEAL 1224 CHO-SEAL 1221	silver in silicone  fluorosilicone version	>120 dB	Highest shielding and through conductivity; higher physical properties; excellent processing for molding and extrusion; reinforced form available.
CHO-SEAL 1298	silver-plated aluminum in fluorosilicone	90-110 dB	High performance in harshest corrosive environments; material of choice for aircraft and marine military applications (see feature on page 32); good physical properties; molded, extruded or reinforced. Best corrosion resistance among Chomerics' conductive elastomers.
CHO-SEAL 1215 CHO-SEAL 1217	silver-plated copper in silicone  fluorosilicone version	105-120 dB	Resists highest level of EMP induced current; military gasket of choice in non-corrosive environment; excellent processing for molding and extrusion.

Table 2 *continued*

ELASTOMERS FOR TYPICAL MILITARY/AEROSPACE APPLICATIONS <i>continued</i>			
Material	Filler and Binder	Equipment Shielding Requirements (Typ.)	Remarks
CHO-SEAL 1285 CHO-SEAL 1287	silver-plated aluminum in silicone fluorosilicone version	90-110 dB	Military gasket of choice for corrosive environments; lightweight, 200°C max. use temperature; good EMP resistance; molded, extruded and reinforced.
CHO-SEAL 1278	silver-plated nickel in silicone	> 100 dB	High performance in non-corrosive environments; molded parts only; no fluid resistance.
CHO-SEAL S6304, S6305, 6370 CHO-SEAL L6303	nickel-coated graphite in silicone fluorosilicone version	> 100 dB	Good performance in moderately corrosive environments; material of choice for flange finishes needing "bite-through" for good electrical contact; flame retardant 6370 is UL 94V-0 rated.
SPECIALTY ELASTOMERS			
Material	Filler and Binder	Equipment Shielding Requirements (Typ.)	Remarks
CHO-SEAL 1501	silver in silicone foam	80-100 dB	Soft (30 Shore A) for low closure force where gasket shape cannot be exploited; low tear strength; no corrosion resistance or fluid resistance; sheet stock only.
CHO-SIL 1401	silver in reticulate silicone	80-100 dB	High performance for non-corrosive environments; soft (45 Shore A) for low closure force where gasket shape cannot be exploited; low tear strength; no fluid resistance.
CHO-SEAL 1239	silver-plated copper in silicone with expanded copper reinforcement	110 dB	Material for waveguide choke, cover, and flange EMI shielding and pressure sealing; maximum heat transfer and minimum outgassing; hard (80 Shore A), high-strength material; available with raised lip around iris opening for high power/high pressure applications.
CHO-SEAL 1212	silver-plated copper in silicone	120 dB	High strength, hard (80 Shore A) material for waveguide, choke, cover, and flanges with grooves for EMI and pressure sealing.
CHO-SEAL E6434 (molded) CHO-SEAL E6434E (extruded)	silver-plated nickel in EPDM	95 dB 90 dB	Material of choice for high shielding where NBC fluid resistance is needed; high performance in corrosive environments.
CHO-SEAL E6306	nickel-coated graphite in EPDM	>90 dB	Good performance in moderately corrosive environments; excellent NBC fluid resistance; good physical properties.
CHO-SEAL V6433	silver-plated nickel in fluorocarbon	100 dB	Material of choice for extensive fluid resistance; no corrosion resistance.
CHO-SIL 1485	silver-plated aluminum in reticulate silicone	50-100 dB	Moderate corrosion resistance for military applications.
CHO-SEAL S6600 and S6602	carbon in silicone	30-80 dB	Low-end shielding or ESD protection; high tensile strength; no corrosion or fluid resistance.

Table 3

CONDUCTIVE ELASTOMER SPECIFICATIONS (grouped by filler)												
	Test Procedure (Type of Test)	CHO-SEAL 1221	CHO-SEAL 1224	CHO-SIL 1401 <sup>d</sup>	CHO-SEAL 1501 <sup>m</sup>	CHO-SEAL 1212 <sup>m</sup>	CHO-SEAL 1215 <sup>d</sup>	CHO-SEAL 1217	CHO-SEAL 1239 <sup>m</sup>	CHO-SEAL 1273		
Conductive Filler		Ag	Ag	Ag	Ag	Ag/Cu	Ag/Cu	Ag/Cu	Ag/Cu	Ag/Cu		
Elastomer Binder		Fluoro-silicone	Silicone	Silicone	Silicone	Silicone	Silicone	Fluoro-silicone	Silicone	Silicone		
Type (Ref. MIL-G-83528)		Type F	Type E	—	—	Type K	Type A	Type C	Type G	—		
Volume Resistivity, ohm-cm, max., as supplied (without pressure-sensitive adhesive) Para. 4.6.11	CEPS-0002 <sup>a</sup>	—	—	—	—	—	—	—	—	0.004		
	MIL-G-83528	0.002	0.002	0.010	0.03	0.005	0.004	0.010	0.007	—		
Hardness (Shore A)	ASTM D2240 (Q/C)	75 ±5	65 ±5	45 ±5	35 ±7	80 ±5	65 ±5	75 ±5	80 ±5	65 ±8		
Specific Gravity (±0.25)	ASTM D792 (Q/C)	4.0	3.5 ±0.45	1.6	2.7 (typ.)	3.5	3.5 ±0.45	4.1/3.8 <sup>e</sup>	4.75 ±0.75	3.7		
Tensile Strength, psi (MPa), min.	ASTM D412 (Q/C)	250 (1.72)	300 (2.07)	200 (1.38)	80 (0.55)	400 (2.76)	200 (1.38)	180 (1.24)	600 (4.14)	175 (1.21)		
Elongation, % min. or % min./max.	ASTM D412 (Q/C)	100/300	200/500	75	NA	100/300	100/300	100/300	20/NA	75		
Tear Strength, lb/in. (kN/m), min.	ASTM D624 (Q)	40 (7.00)	50 (8.75)	20 (3.50)	20 (3.50)	40 (7.00)	40/25 <sup>e</sup>	35 (6.13)	70 (12.25)	—		
Compression Set, 70 hrs @ 100°C, % max. <sup>b</sup>	ASTM D395 Method B (Q)	60	45	35	80	35	32	35	NA	32		
Low Temperature Flex TR10, °C, min.	ASTM D1329 (Q)	-65	-65	-55	NA	-45	-65	-55	NA	-65		
Maximum Continuous Use Temperature, °C <sup>c</sup>	(Q)	160/200	160/200	160/200	160/200	125	125	125	125	125		
Shielding Effectiveness (see Note below)	200 kHz (H Field) 100 MHz (E Field) 500 MHz (E Field) 2 GHz (Plane Wave) 10 GHz (Plane Wave)	dB, min.	Method (1)	Method (2)	Method (2)	Method (2)	Method (2)	Method (2)	Method (2)	Method (2)	Method (1)	
			CHO-TM-TP08 <sup>a</sup>	Method (2)	Method (2)	Method (2)	Method (2)	Method (2)	Method (2)	Method (2)	Method (2)	Method (1)
			MIL-G-83528	70	70	60	60	70	70	70	70	—
			Para. 4.6.12 (Q)	120	120	100	100	100	100	100	100	100
			MIL-G-83528	120	120	100	100	120	120	120	110	100
Para. 4.6.12 (Q)	120	120	90	90	120	120	115	110	100			
120	120	80	80	120	120	110	110	100				
Electrical Stability	Heat Aging	ohm-cm, max.	CEPS-0002 <sup>a</sup>	—	—	—	—	—	—	—	0.01	
			MIL-G-83528	0.010	0.010	0.015	NA	0.010	0.010	0.015	0.010	—
			Para. 4.6.15 (Q/C)	0.010	0.010	0.015	NA	0.010	0.006	0.015	0.010	—
			MIL-G-83528	0.002	0.002	0.01	0.03	0.005	0.004	0.010	0.007	—
Para. 4.6.13 (Q)	0.010	0.010	0.02	NA	0.010	0.008	0.015	NA	—			
Post Tensile Set Volume Resistivity	MIL-G-83528	0.010	0.010	0.02	NA	0.010	0.008	0.015	NA	—		
Para. 4.6.9 (Q/C)	MIL-G-83528	>0.9	>0.9	note f	>0.3	>0.9	>0.9	>0.9	>0.9	—		
Para. 4.6.16 (Q)	MIL-G-83528	>0.9	>0.9	note f	>0.3	>0.9	>0.9	>0.9	>0.9	—		
Para. 4.6.16 (Q)	MIL-G-83528	>0.9	>0.9	note f	>0.3	>0.9	>0.9	>0.9	>0.9	—		

<sup>a</sup> Copies of CEPS-0002 and CHO-TM-TP08 are available from Chomerics

<sup>b</sup> Compression set is expressed as a percentage of deflection per ASTM D395 Method B., at 25% deflection. To determine percent recovery, subtract 1/4 of stated compression set value from 100%. For example, in the case of 30% compression set, recovery is 92.5%.

<sup>c</sup> Where two values are shown: First represents max. operating temp. for conformance to MIL-G-83528 (which requires Group A life testing at 1.25 times max. operating temp.) Second value represents practical limit for exposure up to 1000 hours (compressed between flanges 7-10%). Single value conforms to both definitions.

<sup>d</sup> Extruded version of 1215 was formerly designated 1250; extruded version of 1401 was formerly designated 1405.

<sup>e</sup> Second value applies to extruded forms only.

<sup>f</sup> CHO-SIL 1401 degrades electrically after simulated EMP current levels < 0.9 kA per in.

■ Not available in extruded form.

NA Not Applicable

(Q) Qualification

(C) QC Conformance

**Note:** It may not be inferred that the same level of shielding effectiveness provided by a gasket material tested in the fixture per MIL-G-83528 Para. 4.6.12 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-G-83528, but which is useful for making comparisons between different gasket materials.

## CHO-SEAL 1298 Corrosion-Resistant EMI Shielding Gasket

CHO-SEAL 1298 elastomer incorporates unique particle plating and elastomer technology for increased corrosion resistance. When used in conjunction with the CHO-SHIELD 2000 series of corrosion-resistant conductive coatings on aluminum flanges, a *corrosion-proof* EMI flange system is obtained. CHO-SEAL 1298 gasket material is based on a silver-plated-aluminum filler dispersed in a fluorosilicone

binder, with corrosion inhibiting additives that contain no chromates. It offers shielding effectiveness of 100 dB at 500 MHz and meets all requirements of MIL-G-83528 Type D (initial and aged). CHO-SEAL 1298 gasket material also has excellent resistance to fluids and fuels commonly used in aviation and industrial applications.

### Corrosion Resistance Testing

Chomerics has completed extensive corrosion resistance testing on CHO-SEAL 1298 gasket material

using a gravimetric weight loss procedure. A copy of the test method (CHO-TM 100) is available on request from Chomerics. Test fixtures and elastomer samples are also available. Contact Chomerics' Applications Engineering Department for further information.

### Lightning Strike Resistance

The survivability of any system to lightning strike is dependent on specific flange design. Lightning strike testing of CHO-SEAL 1298 gasket material has demonstrated

Table 3 continued

CONDUCTIVE ELASTOMER SPECIFICATIONS (grouped by filler)													
	Test Procedure (Type of Test)	CHO-SEAL 1291 <sup>■</sup>	CHO-SEAL 1278 <sup>■</sup>	CHO-SEAL V6433 <sup>■</sup>	CHO-SEAL E6434 <sup>■</sup>	CHO-SEAL E6434E <sup>●</sup>	CHO-SEAL 1285	CHO-SEAL 1287	CHO-SEAL 1298	CHO-SIL 1485	CHO-SEAL 1310 <sup>■</sup>		
Conductive Filler		Ag/Cu	Ag/Ni	Ag/Ni	Ag/Ni	Ag/Ni	Ag/Al	Ag/Al	Passivated Ag/Al	Ag/Al	Ag/Glass		
Elastomer Binder		Silicone	Silicone	Fluorocarbon/Fluorosilicone	EPDM	EPDM	Silicone	Fluoro-silicone	Fluoro-silicone	Silicone	Silicone		
Type (Ref. MIL-G-83528)		—	Type L	—	—	—	Type B	Type D	Type D	—	—		
Volume Resistivity, ohm-cm, max., as supplied (without pressure-sensitive adhesive)	CEPS-0002 <sup>a</sup>	0.004	—	—	—	—	—	—	—	—	0.01		
	MIL-G-83528 Para. 4.6.11	—	0.005	0.006	0.006	0.05	0.008	0.012	0.012	0.02	—		
Hardness (Shore A)	ASTM D2240 (Q/C)	70 ±5	75 ±5	85 ±7	75 ±7	80 ±7	65 ±5	70 ±5	70 ±5	60 ±5	70 ±10		
Specific Gravity (±0.25)	ASTM D792 (Q/C)	3.45	4.0	4.8	3.9	3.8	1.9	2.0	2.0	1.7	1.8		
Tensile Strength, psi (MPa), min.	ASTM D412 (Q/C)	175 (1.21)	200 (1.38)	400 (2.76)	200 (1.38)	200 (1.38)	200 (1.38)	180 (1.24)	180 (1.24)	180 (1.24)	200 (1.38)		
Elongation, % min. or % min./max.	ASTM D412 (Q/C)	75	100/300	50	200	100	100/300	60/260	60/260	100	100		
Tear Strength, lb/in. (kN/m), min.	ASTM D624 (Q)	—	30 (5.25)	70 (12.25)	75 (13.13)	70 (12.25)	30 (5.25)	35 (6.13)	35 (6.13)	30 (5.25)	—		
Compression Set, 70 hrs @ 100°C, % max. <sup>b</sup>	ASTM D395 Method B (Q)	32	32	45	40	40	32	30	30	30	35		
Low Temperature Flex TR10, °C, min.	ASTM D1329 (Q)	-45	-55	-25	-45	-45	-65	-55	-55	-40	-40		
Maximum Continuous Use Temperature, °C <sup>c</sup>	(Q)	125	125	200	100	100	160/200	160/200	160/200	85	160		
Shielding Effectiveness (see Note below)	200 kHz (H Field) 100 MHz (E Field) 500 MHz (E Field) 2 GHz (Plane Wave) 10 GHz (Plane Wave)	dB, min.	Method (1) CHO-TM-TP08 <sup>a</sup>	Method (2)	Method (1)	Method (2)	Method (2)	Method (1)	Method (2)	Method (2)	Method (2)	Method (2)	Method (1)
			—	70	—	—	—	60	55	55	50	—	
			100	120	105	105	90	115	110	110	100	100	
			100	120	100	100	90	110	100	100	100	100	
			100	115	90	85	90	105	95	95	90	90	
Electrical Stability	Heat Aging	ohm-cm, max.	CEPS-0002 <sup>a</sup>	0.008	—	—	—	—	—	—	—	0.01	
			MIL-G-83528 Para. 4.6.15 (Q/C)	—	0.010	0.008 <sup>g</sup>	0.0125 <sup>h</sup>	0.05 <sup>h</sup>	0.010	0.015	0.015	0.06 <sup>g</sup>	—
			MIL-G-83528 (Q) Para. 4.6.13 (Q)	—	0.010	NA	NA	NA	0.012	0.015	0.015	0.06	—
			—	0.005	NA	NA	0.05	0.008	0.012	0.012	0.02	—	
			MIL-G-83528 Para. 4.6.9 (Q/C)	—	0.010	—	—	NA	0.015	0.015	0.015	NA	—
EMP Survivability, kA per in. perimeter	MIL-G-83528 Para. 4.6.16 (Q)	—	>0.9	NA	NA	—	>0.9	>0.9	>0.9	>0.3	—		

<sup>a</sup> Copies of CEPS-0002 and CHO-TM-TP08 are available from Chomerics

<sup>b</sup> Compression set is expressed as a percentage of deflection per ASTM D395 Method B., at 25% deflection. To determine percent recovery, subtract 1/4 of stated compression set value from 100%. For example, in the case of 30% compression set, recovery is 92.5%.

<sup>c</sup> Where two values are shown: First represents max. operating temp. for conformance to MIL-G-83528 (which requires Group A life testing at 1.25 times max. operating temp.) Second value represents practical limit for exposure up to 1000 hours (compressed between flanges 7-10%). Single value conforms to both definitions.

<sup>g</sup> Heat aging condition: 200°C/48 hrs.

<sup>h</sup> Heat aging condition: 100°C/48 hrs.

**Note:** It may not be inferred that the same level of shielding effectiveness provided by a gasket material tested in the fixture per MIL-G-83528 Para. 4.6.12 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-G-83528, but which is useful for making comparisons between different gasket materials.

■ Not available in extruded form.  
● Not available in sheet or molded form.  
NA Not Applicable  
(Q) Qualification  
(C) QC Conformance

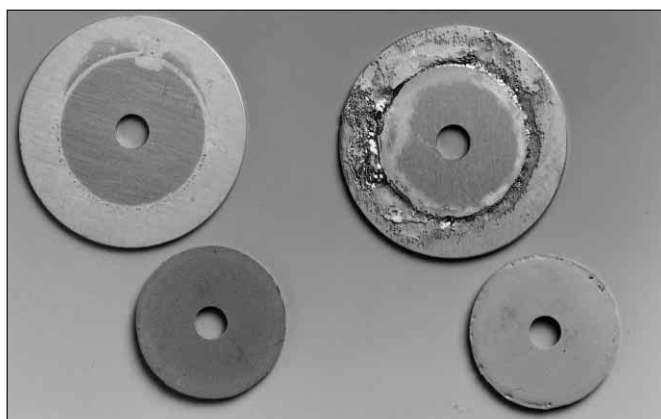
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survivability beyond 5 kA/in. Test data is available on request.

### Ordering Information

CHO-SEAL 1298 gaskets are available in all standard forms including molded, die-cut and extruded. The material is also available reinforced with Dupont Dacron<sup>®</sup> fabric, woven wire mesh and/or 3M Nextel<sup>®</sup> fabric. See page 76 for more information.

For more information on corrosion control, refer to the EMI Shielding Theory and Design Guide, which begins on page 191.



Comparison of corrosion results obtained from CHO-SEAL 1298 conductive elastomer (left) and pure silver-filled elastomer (right) mated with chromated aluminum for 168 hours of salt fog exposure.

Table 3 *continued*

CONDUCTIVE ELASTOMER SPECIFICATIONS (grouped by filler)													
	Test Procedure (Type of Test)	CHO-SEAL 1350	CHO-SIL 1356 <sup>●</sup>	CHO-SEAL L6303	CHO-SEAL S6304	CHO-SEAL S6305	CHO-SEAL E6306 <sup>■</sup>	CHO-SEAL 6370 <sup>▲</sup>	CHO-SEAL S6600	CHO-SEAL S6602 <sup>■</sup>			
Conductive Filler		Ag/Glass	Ag/Glass	Ni/C	Ni/C	Ni/C	Ni/C	Ni/C	C	C			
Elastomer Binder		Silicone	Silicone	Fluoro- silicone	Silicone	Silicone	EPDM	Silicone	Silicone	Silicone			
Type (Ref. MIL-G-83528)		Type M	—	—	—	—	—	—	—	—			
Volume Resistivity, ohm-cm, max., as supplied (without pressure- sensitive adhesive)	CEPS-0002 <sup>a</sup>	—	0.05	—	—	—	—	0.1	7.0	8.0			
	MIL-G-83528 Para. 4.6.11	0.01	—	0.1	0.1	0.1	5	—	—	—			
Hardness (Shore A)	ASTM D2240 (Q/C)	65 ±5	55 ±10	65 ±10	55 ±10	65 ±10	75 ±7	60 ±10	75 ±7	65 ±7			
Specific Gravity (±0.25)	ASTM D792 (Q/C)	1.8	1.7	2.2	1.9	2.0	1.9	2.1	1.2	1.2			
Tensile Strength, psi (MPa), min.	ASTM D412 (Q/C)	150 (1.03)	100 (0.69)	150 (1.03)	150 (1.03)	200 (1.38)	200 (1.38)	150 (1.03)	650 (4.49)	550 (3.80)			
Elongation, % min. or % min./max.	ASTM D412 (Q/C)	75	50	60	100	100	75	100	70	100			
Tear Strength, lb/in. (kN/m), min.	ASTM D624 (Q)	30/25 <sup>j</sup>	20 (3.50)	35 (6.13)	35 (6.13)	50 (8.75)	70 (12.25)	35 (6.13)	—	—			
Compression Set, 70 hrs @ 100°C, % max. <sup>b</sup>	ASTM D395 Method B (Q)	30	35	25	30	30	40	40	45	45			
Low Temperature Flex TR10, °C, min.	ASTM D1329 (Q)	-55	-40	-45	-45	-45	-45	-45	-45	-45			
Maximum Continuous Use Temperature, °C <sup>c</sup>	(Q)	160	160	150	150	150	100	150	200	200			
Shielding Effectiveness (see note below)	200 kHz (H Field) 100 MHz (E Field) 500 MHz (E Field) 2 GHz (Plane Wave) 10 GHz (Plane Wave)	db, min.	Method (2)	Method (1)	Method (2)	Method (1)	Method (1)	Method (2)	Method (1)	Method (1)	Method (1)		
			CHO-TM-TP08 <sup>a</sup>	50	—	NA	NA	NA	—	—	—	—	
			MIL-G-83528	100	65	100	100	100	95	100	80	80	
			MIL-G-83528	100	65	100	100	100	90	100	80	80	
			Para 4.6.12 (Q)	90	70	100	100	100	85	95	60	60	
			80	65	100	100	85	95	50	50			
Electrical Stability	Heat Aging	ohm-cm, max.	CEPS-0002 <sup>a</sup>	—	0.05	0.25 <sup>i</sup>	0.25 <sup>i</sup>	0.25 <sup>i</sup>	—	0.25 <sup>i</sup>	7.0	8.0	
			MIL-G-83528 Para. 4.6.15 (Q/C)	0.01	—	—	—	—	10 <sup>h</sup>	—	—	—	
			Vibration Resistance	During	MIL-G-83528 (Q)	NA	—	0.1	NS	0.1	NA	—	—
				After	Para. 4.6.13 (Q)	NA	—	0.1	NS	0.1	NA	—	—
			Post Tensile Set Volume Resistivity	MIL-G-83528 Para. 4.6.9 (Q/C)	0.01	—	—	—	—	NA	—	—	—
EMP Survivability, kA per in. perimeter	MIL-G-83528 Para. 4.6.16 (Q)	NS	—	0.1	0.1	0.1	NA	—	—	—			

<sup>a</sup> Copies of CEPS-0002 and CHO-TM-TP08 are available from Chomerics

<sup>b</sup> Compression set is expressed as a percentage of deflection per ASTM D395 Method B., at 25% deflection. To determine percent recovery, subtract 1/4 of stated compression set value from 100%. For example, in the case of 30% compression set, recovery is 92.5%.

<sup>c</sup> Where two values are shown: First represents max. operating temp. for conformance to MIL-G-83528 (which requires Group A life testing at 1.25 times max. operating temp.) Second value represents practical limit for exposure up to 1000 hours (compressed between flanges 7-10%). Single value conforms to both definitions.

<sup>h</sup> Heat aging condition: 100°C/48 hrs.

<sup>i</sup> Heat aging condition: 150°C/48 hrs.

<sup>j</sup> First value represents conformance to MIL-G-83528.

■ Not available in extruded form.

● Not available in sheet or molded form.

NA Not Applicable

NS Not Survivable

(Q) Qualification

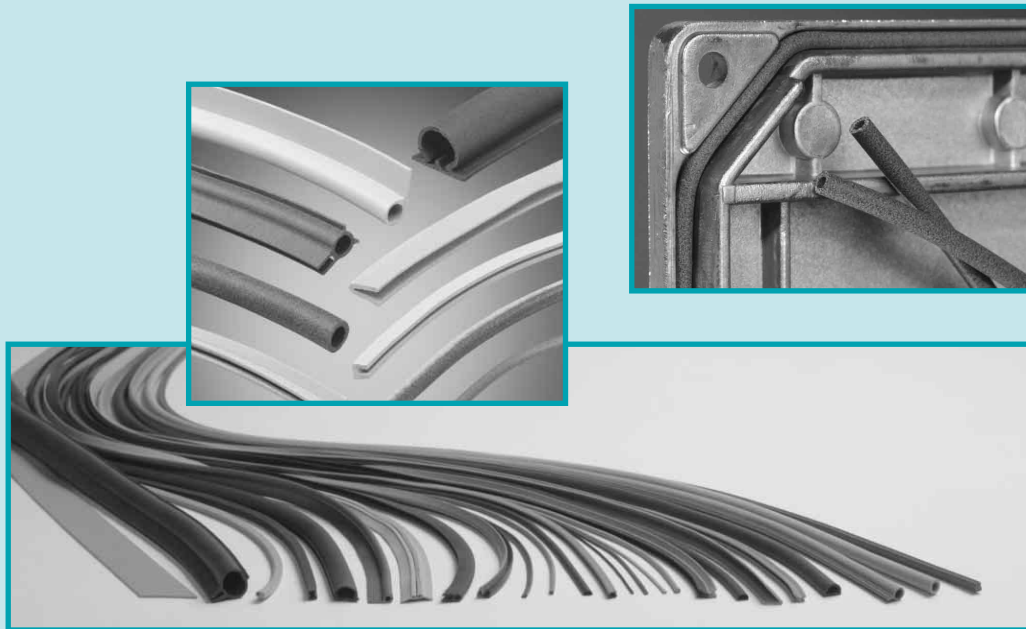
(C) QC Conformance

▲ UL 94V-0 Rated

**Note:** It may not be inferred that the same level of shielding effectiveness provided by a gasket material tested in the fixture per MIL-G-83528 Para. 4.6.12 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-G-83528, but which is useful for making comparisons between different gasket materials.



# Conductive Elastomer Extrusions...



## ***Availability, Design Flexibility, Cost Effectiveness, Proven Performance.***

*Once used mainly to shield critical defense and aerospace electronic systems, Chomerics' conductive elastomer extrusions have also become the progressive choice for packaging designers of telecommunications, information technology and industrial equipment.*

Conductive elastomers are reliable over the life of the equipment. The same gasket is both an EMI shield and an environmental seal. Elastomer gaskets resist compression set, accommodate low closure force, and help control airflow. They're available in corrosion-resistant and flame-retardant grades. Their aesthetic advantages are obvious.

Almost any elastomer profile can be extruded, with short lead times for prototypes and large orders. Chomerics offers hundreds of standard extrusions, many off-the-shelf from a nearby distributor/ fabricator. Extrusions are readily lathe-cut, spliced, bonded, kiss-cut, or even die-cut to reduce installation labor and conserve material, providing a cost-effective alternative to other methods of EMI shielding and environmental sealing.

# Elastomer Extrusions

## Standard Extrusions— a huge selection (pages 41-47)

Our elastomer extrusions are hollow or solid strips in sizes ranging from a 0.028 inch (0.71 mm) solid O cross section to a 2.00 inch (50.8 mm) wide flat ribbon. Existing tooling available in hundreds of sizes allows immediate production of standard profiles:

Solid O	Solid Rectangle
Hollow O	Hollow Rectangle
Solid D	Channel
Hollow D	Hollow P
“Mushroom” D (U.S. Pat. 06075205)	Open V

Standard profiles are efficient for the great majority of applications. Even problematic low closure force can be accommodated by lightweight, hollow gasketing.

There is generally no tooling charge for standard items. If needed, tooling of new dies for standard profiles is relatively inexpensive. Moreover, extrusions minimize material waste and don't require post-manufacture processing to remove flash. Subject only to packaging constraints, extrusions are produced as continuous lengths on reels.

## Custom shapes in endless variety (pages 48-54)

Chomerics routinely produces elastomer extrusions in unusual sizes and intricate configurations to meet special needs. Refer to page 48 to explore nearly 200 specialized designs for which tooling already exists. This showcase illustrates the variety and complexity that can be incorporated into extruded elastomers.

## Flame-retardant grade CHO-SEAL® 6370



Chomerics introduced the first conductive elastomer with a UL 94V-0 rating\* down to 0.014 inch (0.356 mm) thickness. This fully-extrudable material is a corrosion-resistant, nickel-plated-graphite filled composite with shielding effectiveness equivalent to or better than other commercial grade gaskets: 95 dB from 100 MHz to 10 GHz.

UL File # 96ME 17043

## Co-Extrusions streamline design, reduce expense (pages 55-57)

Co-extruded gaskets typically feature a conductive CHO-SEAL elastomer in parallel with a non-conductive elastomer that provides additional environmental sealing and corrosion protection. Seam vulcanization ensures long-term integrity.

Co-extruded gaskets permit cost-effective use of existing flange designs, as well as attachment under the less-expensive, non-conductive material. Compared to bonding and mounting separate gaskets, or double-groove designs, co-extruded gaskets offer design, cost and handling advantages.

## Full-Service Fabrication

Often cost-competitive for both small and large volumes, conductive elastomer extrusions are readily fabricated for specific applications. These services are performed at the factory or by Chomerics' skilled authorized fabricators throughout North America and overseas.

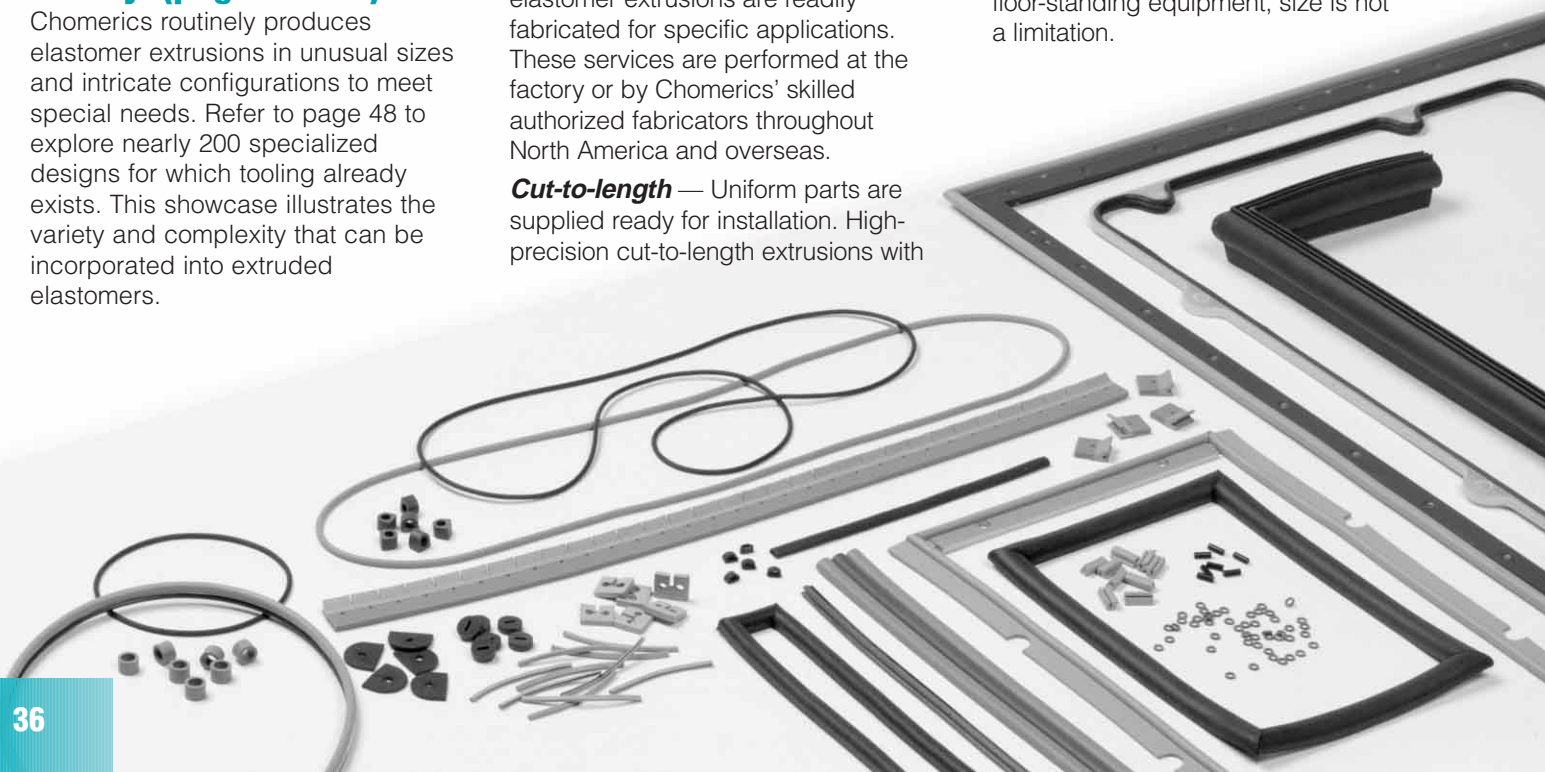
**Cut-to-length** — Uniform parts are supplied ready for installation. High-precision cut-to-length extrusions with

tolerances similar to molded part tolerances are available using the cutting technology of Parker Seal's JBL Division.

**Spliced gaskets** — For fabricated gaskets with a minimum inside diameter of 2 inches (51 mm), extruded strips can be spliced to form a continuous seal. Spliced gaskets offer cost savings over molded gaskets without sacrificing performance. In particular, spliced hollow extrusions yield lightweight, low closure force gaskets at considerable savings. For solid extrusions, the splice is often as strong and resilient as the gasket material's tensile specification (except fluorosilicone).

Gaskets spliced by Chomerics or our authorized fabricators feature a vulcanized joint, formed under heat and pressure, that ensures functionality and a more uniform joint compared with adhesive bonding. For use with retention grooves, corner radii must be equal to or greater than 2.5 times the strip width.

**Frame assemblies** — Chomerics fabricates complete frame/gasket assemblies either in their entirety or using customer-supplied parts. These incorporate vulcanized joints and miters, and often more than one gasket material or profile. With experience ranging from handheld devices to floor-standing equipment, size is not a limitation.



**Bonded gaskets** — Similar and dissimilar compositions and profiles can be bonded in parallel for special requirements. Capabilities include bonded-in compression stops, holes and other features.

**Small, die-cut gaskets from flat extrusions** — Standard rectangular extrusions up to 2 inches (51 mm) wide can provide an economical means of producing die-cut gaskets for some applications.

**Precision washer cuts** — Slicing solid and hollow O-cross sections into disks and washers can save time and cost, with tolerances equivalent to molded parts. For extremely thin parts, <0.060 inch (1.52 mm), Chomerics accesses the advanced production capabilities of Parker Seal's JBL Division ([www.parker.com/jbl](http://www.parker.com/jbl)).

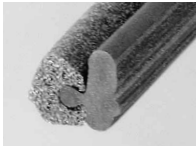
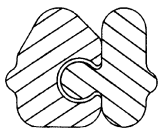
**Kiss-cut grounding pads on tape** — For manual "peel and stick" or robotic "pick and place" application,

grounding pads are readily produced in quantity by kiss-cutting hollow D (or other) extrusions to their PSA release tape. Features such as holes or slots can be incorporated, and co-extrusions may be used. Continuous lengths are supplied on reels.

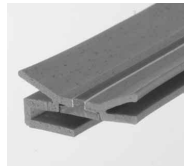
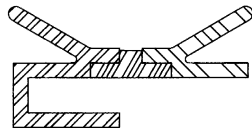
*continued*

## Speed assembly with creative and efficient attachment mechanisms ...

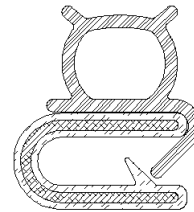
*Tight spaces, weight limits and housing material properties are no problem for Chomerics' elastomer extrusions. Standard elastomer extrusions (except O-strips) can be ordered with pressure-sensitive adhesive. Alternative mounting options offer cost-effective choices in materials and assembly, as well as cosmetic appearance. Here are just a few Chomerics designs that eliminate adhesives, screws and rivets, while adding considerable speed to system assembly. Refer also to the Custom Extrusions Showcase, pages 48-57.*



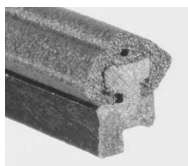
**2-Part "Zipper"** — Friction-fit designs using two gasket materials —  
conductive/conductive,  
conductive/non-conductive,  
fluorosilicone/silicone, etc.  
Especially appropriate for nuclear/  
biological/chemical (NBC)  
resistant applications or other  
environmental concerns.



**Hollow "E"** — Adhesive-free, aesthetic design for attachment beneath an interior door "plate", presenting an easily compressed hollow profile.



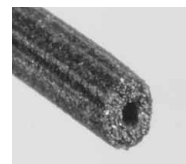
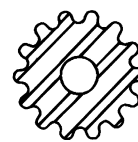
**Metal Clip Extrusion** — Conductive elastomer with integral metal clip. The clip provides mechanical attachment that conveniently replaces adhesive or bonding measures.



**Friction-fit to a packaging feature** — Gaskets that mount on integral tangs accommodate thin walls, limited space and intricate package shapes... without glue, rivets or tape.



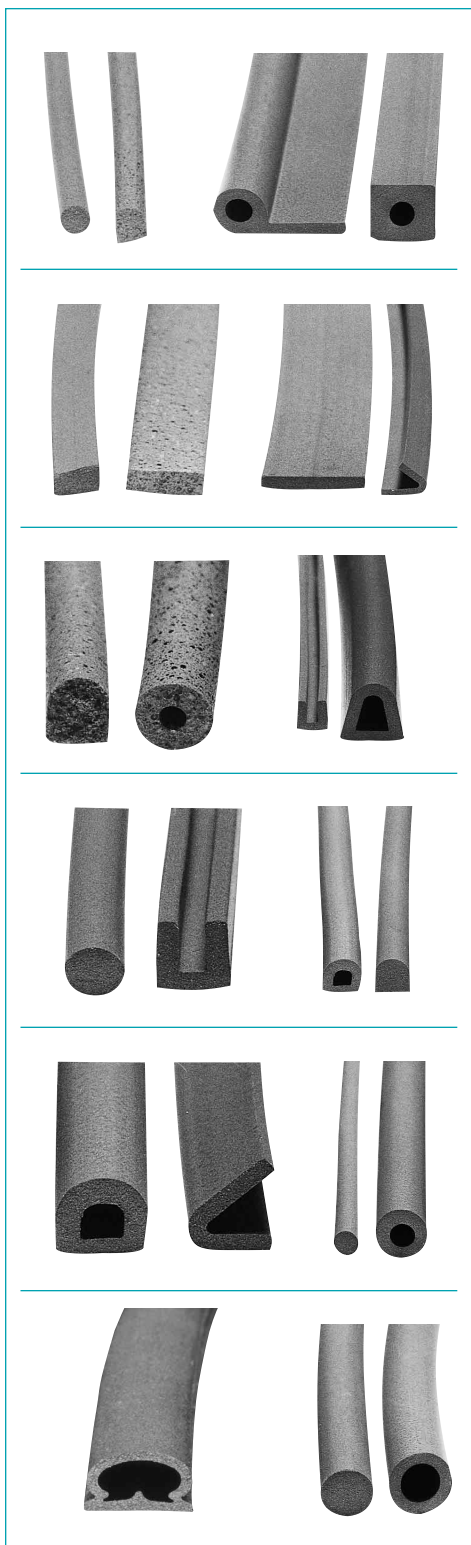
**Clip-on Gaskets** — Choice of conductive elastomer secured in a rapidly installed, corrosion-resistant, stainless steel spring clip. Integral teeth bite through paint or surface oxides. Plastic clip-on strips are also available. The conductive elastomer extrusion is sandwiched between the enclosure flange and closed cover.



**Ribbed Profiles** — Friction-fit option for exceptionally secure mounting in grooves, available in a broad range of Chomerics' high performance conductive elastomers.

*Our Applications Engineering specialists provide shielding gasket approaches that reduce overall manufacturing costs.*





### Ordering Procedure

For standard configurations, select the Chomerics part number from Tables 7-16. The last four or five digits designate the material type. Orders must also specify quantity in length (feet or meters). Please note that minimum order quantities may apply. Subject only to packaging constraints, the gaskets are shipped in continuous lengths on reels.

For custom configurations, cut-to-length parts, or spliced strips, drawings must be provided. Part numbers for these will be assigned by Chomerics.

Table 1

EXTRUDED STRIP GASKETS <i>inch (mm)</i>	TOLERANCE
<b>Cut Length</b>	
<1.000 (25.40)	±0.010 (0.25)
1.0 to 30.000 (25.40 to 762)	±0.062 (1.58)
> 30.000 (762)	±0.2% Nom. Dim.
<b>Cross Section</b>	
< 0.200 (5.08)	±0.005 (0.13)
0.200-0.349 (5.08-8.86)	±0.008 (0.20)
0.350-0.500 (8.89-12.70)	±0.010 (0.25)
> 0.500 (12.70)	±3% Nom. Dim.

### General Tolerances

The table above provides general tolerances for extruded conductive elastomer gaskets. It is important to note that *all flat die-cut, molded, and extruded gaskets are subject to free-state variation in the unrestrained condition.* The use of inspection fixtures to verify conformance of finished parts is common and recommended where appropriate.

### Material Selection and Manufacturing Limitations

The extruded strips listed in this section are generally available in the CHO-SEAL and CHO-SIL materials enumerated at the top of the next column, specifications for which are shown on pages 32-34. The physical characteristics of certain materials, however, make them unextrudable in very small sizes. General manufacturing

limitations are shown in Table 2 (opposite). Specific material **exceptions (non-availability)** are denoted by numerical superscripts following certain part numbers in Tables 7-16. The superscripts are defined as follows:

Code	Material
1	1215, 1273, S6304, S6305, 6370, S6600
2	1217, 1221, 1224, 1350, L6303
3	1285, 1287, 1298, 1356, 1485
4	1401

### Pressure-Sensitive Adhesive (PSA)

Chomerics' extruded conductive elastomer EMI gaskets are available with tenacious, non-conductive pressure-sensitive adhesive (PSA) tape for permanent attachment. Typical properties for this adhesive are shown in Table 3. Peel strength data appears in Table 4. These acrylic pressure-sensitive adhesives do not appreciably affect the through-flange resistance of the EMI gasket (see Table 5). Rapid thermal cycle testing does not affect peel strength (see Table 6).

### Pressure-Sensitive Adhesive Widths, inch (mm)

0.090 (2.29)	0.220 (5.08)
0.100 (2.54)	0.250 (6.35)
0.125 (3.17)	0.500 (12.70)
0.160 (4.06)	

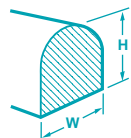
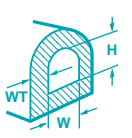
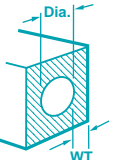
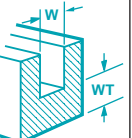
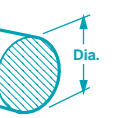
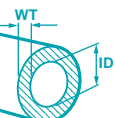
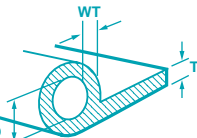

In general, pressure-sensitive adhesive requires a minimum of 0.125 inch (3.17 mm) mating surface. For this reason, Chomerics does not ordinarily supply pressure-sensitive adhesive on solid or hollow O-strips.

### PSA Ordering Procedure

Pressure-sensitive adhesive may be ordered for any standard extrusion (other than Solid and Hollow O-Strips) which has a 0.125 inch (3.17 mm) mating surface. The standard Part Numbers listed in Tables 9-15 must be modified by Chomerics to designate pressure-sensitive adhesive. Contact us for this information.

*continued*

**Table 2**

<b>EXTRUSION MANUFACTURING GUIDELINES &amp; LIMITATIONS, inches (mm)</b> <i>Minimum dimensions allowed for manufacturing consistency</i>																
																
Mat'l	H	W	WT	H	W	Dia.	WT	WT	W	Dia.	WT	ID	WT	T	ID	T*
1215	0.035 (0.89)	0.035 (0.89)	0.020 (0.51)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.025 (0.64)	0.020 (0.51)	0.020 (0.51)	0.028 (0.71)	0.015 (0.38)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
1217	0.035 (0.89)	0.035 (0.89)	0.025 (0.64)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.032 (0.81)	0.032 (0.81)	0.020 (0.51)	0.035 (0.89)	0.020 (0.51)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
1221	0.035 (0.89)	0.035 (0.89)	0.025 (0.64)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.032 (0.81)	0.032 (0.81)	0.020 (0.51)	0.035 (0.89)	0.020 (0.51)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
1224	0.035 (0.89)	0.035 (0.89)	0.025 (0.64)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.032 (0.81)	0.032 (0.81)	0.020 (0.51)	0.035 (0.89)	0.020 (0.51)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
1273	0.035 (0.89)	0.035 (0.89)	0.020 (0.51)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.025 (0.64)	0.020 (0.51)	0.020 (0.51)	0.028 (0.71)	0.015 (0.38)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
1285	0.040 (1.02)	0.040 (1.02)	0.025 (0.64)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.032 (0.81)	0.032 (0.81)	0.020 (0.51)	0.040 (1.02)	0.020 (0.51)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
1287	0.040 (1.02)	0.040 (1.02)	0.025 (0.64)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.032 (0.81)	0.032 (0.81)	0.020 (0.51)	0.040 (1.02)	0.020 (0.51)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
1298	0.040 (1.02)	0.040 (1.02)	0.025 (0.64)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.032 (0.81)	0.032 (0.81)	0.020 (0.51)	0.040 (1.02)	0.020 (0.51)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
1350	0.035 (0.89)	0.035 (0.89)	0.025 (0.64)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.032 (0.81)	0.032 (0.81)	0.020 (0.51)	0.035 (0.89)	0.020 (0.51)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
1356	0.040 (1.02)	0.040 (1.02)	0.025 (0.64)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.032 (0.81)	0.032 (0.81)	0.020 (0.51)	0.040 (1.02)	0.020 (0.51)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
1401	0.062 (1.57)	0.062 (1.57)	0.045 (1.14)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.045 (1.14)	0.045 (1.14)	0.020 (0.51)	0.062 (1.58)	0.045 (1.14)	0.020 (0.51)	0.045 (1.14)	0.045 (1.14)	0.045 (1.14)	0.045 (1.14)
1485	0.040 (1.02)	0.040 (1.02)	0.025 (0.64)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.032 (0.81)	0.032 (0.81)	0.020 (0.51)	0.040 (1.02)	0.020 (0.51)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
L6303	0.035 (0.89)	0.035 (0.89)	0.025 (0.64)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.032 (0.81)	0.032 (0.81)	0.020 (0.51)	0.035 (0.89)	0.020 (0.51)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
S6304	0.035 (0.89)	0.035 (0.89)	0.020 (0.51)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.025 (0.64)	0.020 (0.51)	0.020 (0.51)	0.028 (0.71)	0.015 (0.38)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
S6305	0.035 (0.89)	0.035 (0.89)	0.020 (0.51)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.025 (0.64)	0.020 (0.51)	0.020 (0.51)	0.028 (0.71)	0.015 (0.38)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
S6600	0.035 (0.89)	0.035 (0.89)	0.020 (0.51)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.025 (0.64)	0.020 (0.51)	0.020 (0.51)	0.028 (0.71)	0.015 (0.38)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
6370	0.035 (0.89)	0.035 (0.89)	0.020 (0.51)	0.040 (1.02)	0.040 (1.02)	0.020 (0.51)	0.025 (0.64)	0.020 (0.51)	0.020 (0.51)	0.028 (0.71)	0.015 (0.38)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)	0.045 (1.14)	0.031 (0.79)
E6434E	For Solid O, min. dia. is 0.139 (3.53). For other cross sections, min. wall thickness is 0.062 (1.57). Not all cross sections are available. Contact Applications Engineering.															

\*Maximum width of 1.00 (25.4) at minimum thickness of 0.031 (0.79). Dimensions shown in inches. 1 inch = 25.4 mm.

Consult Chomerics' Applications Engineering Department concerning material compatibility for smaller dimensions and custom extrusions.

(PSA Attachment, *continued*)

**Table 3**

PRESSURE-SENSITIVE ADHESIVE TYPICAL PROPERTIES	
Adhesive Description	Pressure-sensitive acrylic with release liner
Service Temperature Range	-20 to +150°F (-29 to +66°C); PSA will function for short periods of time @ 200°F (93°C); ultimate high temperature limit 250°F (121°C)
Shelf Life Conditions	One year at 158°F (70°C)/50% RH
Application Temperature Range	40 to 150°F (4 to 66°C)

**Table 5**

TYPICAL THROUGH FLANGE ELECTRICAL RESISTANCE			
Chomerics P/N 10-05-3369-S6304 (Ni/C filled silicone)		@ 10% deflection	@ 25% deflection
Hollow "D" Shape Extrusion	w/PSA	0.23 ohm	0.14 ohm
	w/out PSA	0.16 ohm	0.14 ohm

**Table 4**

TYPICAL PEEL STRENGTH <i>lb/inch (N/mm)</i>		
Property	On Aluminum	On Steel
Initial Peel Strength	6.0 (1.05)	6.0 (1.05)
Heat Aged Peel Strength*	5.4 (0.945)	5.4 (0.945)
Humidity Peel Strength**	6.0 (1.05)	6.0 (1.05)

Peel Strength Test Data Per ASTM D1000 (90° peel).

\* Heat aging 168 hrs/ 158°F (70°C).

\*\* Humidity 168 hrs/95% RH/ 158°F (70°C).

**Table 6**

RAPID THERMAL CYCLING* <i>lb/inch (N/mm)</i>		
Conductive Elastomer	Flange	Peel Strength (90°)
<b>CHO-SEAL 1485</b> (Silver-Plated-Aluminum-Filled Silicone)	Steel	7.0 (1.23)
	Aluminum	7.0 (1.23)
<b>CHO-SEAL S6304</b> (Nickel-Plated-Graphite-Filled Silicone)	Steel	6.5 (1.14)
	Aluminum	5.5 (0.96)

\*Per ASTM D1000; 5 cycles at -48° to 212°F (-40° to 100°C) with dwell time of 15 minutes at each extreme.

## Instructions for Surface Preparation and Installing Gaskets with PSA

### Surface Preparation of Metallic Substrates

Optimal performance of the pressure-sensitive adhesive requires that the substrates to which these gaskets must adhere are cleaned prior to application. Chomerics has developed specific, easy-to-follow procedures for preparing the following substrates:

- Phosphate-Coated Steel
- Conversion-Coated Aluminum
- Stainless Steel and Mild Steel

It is essential to follow these cleaning instructions to ensure maximum adhesion of the PSA to metal substrates. *Failure to comply with the appropriate cleaning process could result in poor adhesion. Proper safety precautions should be followed to protect the operator.*

#### Materials Required:

3M Scotch Brite Pads or equivalent, Rubber Gloves, Safety Glasses, Lint-Free Cotton Wipes; MEK, Acetone or Isopropyl Alcohol (IPA).

### Surface Preparation of Conversion-Coated Aluminum and Phosphate-Coated Steel

- A. Using a clean, lint-free applicator, moistened with MEK, acetone solvent or IPA, wash the aluminum surface until all traces of contamination have been removed.
- B. Clean the surface until the cotton applicator shows no discoloration.

- C. If discoloration still exists, continue washing, changing the cotton applicator each time, until clean. *Note: With phosphate coatings, it is very hard to remove all discoloration from the surface so it is **up to the operator** to determine the cleanliness of the surface prior to bonding. Typically, cleaning the surface 3 times is required.*
- D. Allow the substrate to dry completely at room temperature. After the cleaning sequence is complete, do not touch the substrate with bare hands.
- E. If the cleaned surfaces do not have the PSA applied within an 8-hour period, rewash using the above process.

### Surface Preparation of Stainless Steel and Mild Steel

- A. Using a 3M Scotch Brite pad or equivalent, lightly abrade the steel surface.
- B. Blow the dust residue off the steel surface with oil-free filtered air.
- C. Follow Steps A through E from previous section to complete surface preparation.

### Gasket Installation Procedure

- A. Cut gasket material to specific lengths per drawing. If gasket is one piece (e.g., four corner

spliced gasket), pre-fit the assembly to ensure fit and location.

- B. Remove a portion of the release liner and position the gasket. Press firmly against gasket to tack in place. Continue pressing along entire length of gasket until it is positioned and aligned to the mating surface.

- C. Using a rubber roller, apply moderate pressure to the entire gasket to ensure complete contact between the PSA and substrate. *Note: It is important during this rolling procedure that the operator not apply excessive pressure to the gasket. Extreme pressure will cause the gasket to elongate and creep as it relaxes, which may cause an intermittent bond to the substrate surface.*

### Optimum Application Temperature

Temperatures below 50°F (10°C) can cause poor gasket adhesion to the substrate. Ideal gasket installation temperature is 72°F (22°C), ambient room temperature. All materials should be stored at this temperature when not in use. Hardware and gasket materials stored below 50°F should be brought to room temperature before installing gasket.

# Standard Extrusion Sizes

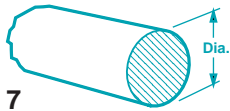


Table 7

SOLID O-STRIPS			
Chomerics P/N* MIL P/N: M83528 001X <sup>†</sup> ( )	Nominal Dimension [Dia.]	"Rule of Thumb" Groove Dimensions <sup>††</sup>	
		Depth	Width
19-04-12895-XXXX <sup>2,3,4</sup>	0.028 (0.71)	0.018 (0.46)	0.055 (1.40)
19-04-W993-XXXX <sup>2,3,4</sup>	0.030 (0.76)	0.020 (0.51)	0.056 (1.42)
19-04-12896-XXXX <sup>2,3,4</sup>	0.032 (0.81)	0.022 (0.56)	0.056 (1.42)
19-04-12897-XXXX <sup>2,3,4</sup>	0.033 (0.84)	0.023 (0.58)	0.056 (1.42)
10-04-6386-XXXX (001)	0.040 (1.02)	0.029 (0.74)	0.061 (1.55)
10-04-9139-XXXX	0.048 (1.22)	0.037 (0.94)	0.065 (1.65)
10-04-C317-XXXX	0.050 (1.27)	0.038 (0.97)	0.068 (1.73)
10-04-3560-XXXX (002)	0.053 (1.35)	0.041 (1.04)	0.070 (1.78)
19-04-X294-XXXX	0.060 (1.52)	0.047 (1.19)	0.076 (1.93)
10-04-2561-XXXX (003)	0.062 (1.57)	0.049 (1.24)	0.077 (1.96)
10-04-1687-XXXX (004)	0.070 (1.78)	0.056 (1.42)	0.084 (2.13)
19-04-12898-XXXX	0.074 (1.88)	0.060 (1.52)	0.087 (2.21)
19-04-11228-XXXX	0.075 (1.91)	0.061 (1.55)	0.087 (2.21)
19-04-12899-XXXX	0.077 (1.96)	0.063 (1.60)	0.089 (2.26)
19-04-12900-XXXX	0.079 (2.01)	0.064 (1.63)	0.091 (2.31)
10-04-2657-XXXX (005)	0.080 (2.03)	0.065 (1.65)	0.092 (2.34)
19-04-12901-XXXX	0.085 (2.16)	0.069 (1.75)	0.097 (2.46)
19-04-M394-XXXX	0.090 (2.29)	0.073 (1.85)	0.102 (2.59)
10-04-2865-XXXX (006)	0.093 (2.36)	0.076 (1.93)	0.104 (2.64)
10-04-3509-XXXX	0.100 (2.54)	0.082 (2.08)	0.110 (2.79)
10-04-1720-XXXX (007)	0.103 (2.62)	0.084 (2.13)	0.114 (2.90)
19-04-12902-XXXX	0.106 (2.69)	0.087 (2.21)	0.114 (2.90)

continued

Table 7 continued

SOLID O-STRIPS			
Chomerics P/N* MIL P/N: M83528 001X <sup>†</sup> ( )	Nominal Dimension [Dia.]	"Rule of Thumb" Groove Dimensions <sup>††</sup>	
		Depth	Width
10-04-2866-XXXX	0.112 (2.84)	0.092 (2.34)	0.121 (3.07)
10-04-3077-XXXX (008)	0.119 (3.02)	0.098 (2.49)	0.128 (3.25)
10-04-2463-XXXX (009)	0.125 (3.18)	0.102 (2.59)	0.135 (3.43)
10-04-2862-XXXX	0.130 (3.30)	0.107 (2.72)	0.138 (3.51)
19-04-12903-XXXX	0.134 (3.40)	0.110 (2.79)	0.143 (3.63)
10-04-1721-XXXX (010)	0.139 (3.53)	0.114 (2.90)	0.147 (3.73)
19-04-12904-XXXX	0.147 (3.73)	0.120 (3.05)	0.156 (3.96)
10-04-3982-XXXX	0.150 (3.81)	0.123 (3.12)	0.158 (4.01)
19-04-12906-XXXX	0.158 (4.01)	0.129 (3.28)	0.166 (4.22)
19-04-12905-XXXX	0.159 (4.04)	0.130 (3.30)	0.167 (4.24)
10-04-3231-XXXX	0.160 (4.06)	0.131 (3.33)	0.168 (4.27)
19-04-12907-XXXX	0.170 (4.32)	0.139 (3.53)	0.178 (4.52)
19-04-F371-XXXX (011)	0.188 (4.78)	0.154 (3.91)	0.195 (4.95)
19-04-12908-XXXX	0.195 (4.95)	0.160 (4.06)	0.201 (5.11)
10-04-2864-XXXX (012)	0.216 (5.49)	0.177 (4.50)	0.227 (5.77)
19-04-12909-XXXX	0.219 (5.56)	0.179 (4.55)	0.231 (5.87)
19-04-11453-XXXX	0.220 (5.59)	0.180 (4.57)	0.232 (5.89)
19-04-12910-XXXX	0.236 (5.99)	0.193 (4.90)	0.247 (6.27)
19-04-12911-XXXX	0.247 (6.27)	0.202 (5.13)	0.258 (6.55)
10-04-3076-XXXX (013)	0.250 (6.35)	0.205 (5.21)	0.260 (6.60)

\* Replace XXXX with four or five digit material number (1356, 1273, S6305, etc.). Smallest sizes may not be extrudable in certain materials. For explanation of superscript codes following XXXX, which indicate non-availability, refer to page 38.

† "X" should be replaced by applicable MIL-G-83528B material type (e.g., A, B, C, etc.). Number in parentheses is MIL-G-83528B dash number, which should be inserted (without parentheses) at end of MIL P/N.

†† **Note:** The groove dimensions recommended assume groove tolerance of ±0.002 in. (0.05 mm) for standard solid O- and D-strips. Closure forces are assumed to provide maximum and uniform gasket deflection. If these conditions are not attainable, contact Chomerics' Applications Engineering Department before ordering.

Additional sizes may be available. Please inquire.

continued

(mm dimensions in parentheses)



Table 7 *continued*

SOLID O-STRIPS			
Chomerics P/N* MIL P/N: M83528 001X <sup>†</sup> -( )	Nominal Dimension [Dia.]	"Rule of Thumb" Groove Dimensions <sup>††</sup>	
		Depth	Width
10-04-9769-XXXX	0.280 (7.11)	0.230 (5.84)	0.288 (7.32)
19-04-12912-XXXX	0.291 (7.39)	0.238 (6.05)	0.300 (7.62)
19-04-12913-XXXX	0.292 (7.42)	0.239 (6.07)	0.301 (7.65)
19-04-12914-XXXX	0.317 (8.05)	0.260 (6.60)	0.324 (8.23)
19-04-12915-XXXX	0.324 (8.23)	0.265 (6.73)	0.332 (8.43)
19-04-12916-XXXX	0.329 (8.36)	0.270 (6.86)	0.335 (8.51)
19-04-12917-XXXX	0.348 (8.84)	0.285 (7.24)	0.354 (8.99)
19-04-12918-XXXX	0.367 (9.32)	0.301 (7.65)	0.376 (9.55)
19-04-12919-XXXX	0.379 (9.63)	0.310 (7.87)	0.388 (9.86)
19-04-12920-XXXX	0.393 (9.98)	0.322 (8.18)	0.401 (10.19)
19-04-12921-XXXX	0.410 (10.41)	0.336 (8.53)	0.417 (10.59)
19-04-12922-XXXX	0.420 (10.67)	0.344 (8.74)	0.427 (10.85)
19-04-W337-XXXX	0.429 (10.90)	0.351 (8.92)	0.436 (11.07)
19-04-12923-XXXX	0.479 (12.17)	0.392 (9.96)	0.484 (12.29)
19-04-12924-XXXX	0.570 (14.48)	0.467 (11.86)	0.590 (14.99)
19-04-12925-XXXX	0.635 (16.13)	0.520 (13.21)	0.653 (16.59)
19-04-12926-XXXX	0.661 (16.79)	0.542 (13.77)	0.677 (17.20)
19-04-12927-XXXX	0.831 (21.11)	0.681 (17.30)	0.860 (21.84)
19-04-12928-XXXX	0.876 (22.25)	0.718 (18.24)	0.903 (22.94)
19-04-12929-XXXX	0.894 (22.71)	0.733 (18.62)	0.920 (23.37)
19-04-12930-XXXX	0.922 (23.42)	0.756 (19.20)	0.947 (24.05)

\* Replace XXXX with four or five digit material number (1356, 1273, S6305, etc.). Smallest sizes may not be extrudable in certain materials. For explanation of superscript codes following XXXX, which indicate non-availability, refer to page 38.

<sup>†</sup> "X" should be replaced by applicable MIL-G-83528B material type (e.g., A, B, C, etc.). Number in parentheses is MIL-G-83528B dash number, which should be inserted (without parentheses) at end of MIL P/N.

<sup>††</sup> **Note:** The groove dimensions recommended assume groove tolerance of ±0.002 in. (0.05 mm) for standard solid O- and D-strips. Closure forces are assumed to provide maximum and uniform gasket deflection. If these conditions are not attainable, contact Chomerics' Applications Engineering Department before ordering.

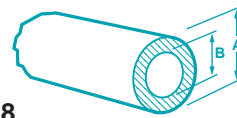


Table 8

HOLLOW O-STRIPS		
Chomerics P/N* MIL P/N: M83528 011X <sup>†</sup> -( )	Nominal Dimensions	
	A	B
19-04-11285-XXXX <sup>2,3,4</sup>	0.040 (1.02)	0.013 (0.33)
10-04-W201-XXXX <sup>2,3,4</sup>	0.053 (1.35)	0.032 (0.81)
10-04-W137-XXXX <sup>4</sup>	0.060 (1.52)	0.020 (0.51)
10-04-W163-XXXX <sup>2,3,4</sup>	0.062 (1.57)	0.035 (0.89)
19-04-14964-XXXX <sup>4</sup>	0.070 (1.78)	0.020 (0.51)
10-04-W202-XXXX <sup>2,3,4</sup>	0.073 (1.85)	0.049 (1.24)
19-04-13803-XXXX <sup>2,3,4</sup>	0.074 (1.88)	0.040 (1.02)
19-04-15465-XXXX <sup>4</sup>	0.080 (2.03)	0.030 (0.76)
19-04-14206-XXXX <sup>4</sup>	0.080 (2.03)	0.040 (1.02)
19-04-11204-XXXX <sup>4</sup>	0.081 (2.06)	0.020 (0.51)
19-04-12570-XXXX <sup>2,3,4</sup>	0.083 (2.11)	0.050 (1.27)
19-04-11220-XXXX <sup>4</sup>	0.090 (2.29)	0.050 (1.27)
10-04-W267-XXXX <sup>4</sup>	0.090 (2.29)	0.050 (1.27)
10-04-W293-XXXX <sup>2,3,4</sup>	0.090 (2.29)	0.060 (1.52)
10-04-W203-XXXX <sup>2,3,4</sup>	0.093 (2.36)	0.061 (1.55)
19-04-16162-XXXX <sup>2,3,4</sup>	0.100 (2.54)	0.070 (1.78)
19-04-11205-XXXX <sup>4</sup>	0.102 (2.60)	0.039 (0.99)
10-04-8363-XXXX <sup>4</sup> (007)	0.103 (2.62)	0.040 (1.02)
10-04-M211-XXXX <sup>4</sup>	0.103 (2.62)	0.040 (1.02)
19-04-10212-XXXX <sup>4</sup>	0.110 (2.79)	0.045 (1.14)
19-04-11218-XXXX <sup>4</sup>	0.110 (2.79)	0.045 (1.14)
19-04-14120-XXXX <sup>4</sup>	0.110 (2.79)	0.062 (1.57)
19-04-15278-XXXX <sup>4</sup>	0.110 (2.79)	0.068 (1.73)
19-04-12534-XXXX <sup>2,3,4</sup>	0.118 (3.00)	0.079 (2.01)
19-04-11216-XXXX <sup>4</sup>	0.122 (3.10)	0.061 (1.55)
19-04-11287-XXXX <sup>4</sup>	0.122 (3.10)	0.061 (1.55)
10-04-2999-XXXX <sup>4</sup> (001)	0.125 (3.18)	0.045 (1.14)
10-04-8817-XXXX <sup>4</sup> (006)	0.125 (3.18)	0.062 (1.57)
19-04-13564-XXXX <sup>4</sup>	0.125 (3.18)	0.070 (1.78)
10-04-W204-XXXX <sup>4</sup>	0.125 (3.18)	0.078 (1.98)
19-04-11283-XXXX <sup>4</sup>	0.125 (3.18)	0.080 (2.03)
10-04-W775-XXXX <sup>4</sup>	0.125 (3.18)	0.085 (2.16)
10-04-5514-XXXX <sup>4</sup>	0.130 (3.30)	0.045 (1.14)
19-04-16390-XXXX	0.135 (3.43)	0.045 (1.14)
19-04-16009-XXXX <sup>4</sup>	0.135 (3.43)	0.085 (2.16)
19-04-X787-XXXX <sup>2,3,4</sup>	0.135 (3.43)	0.097 (2.46)
19-04-14632-XXXX <sup>4</sup>	0.137 (3.48)	0.087 (2.21)
19-04-11289-XXXX <sup>4</sup>	0.145 (3.68)	0.070 (1.78)
19-04-13118-XXXX <sup>4</sup>	0.145 (3.68)	0.080 (2.03)

*continued*

Additional sizes may be available. Please inquire.

(mm dimensions in parentheses)

Table 8 continued

HOLLOW O-STRIPS		
Chomerics P/N* MIL P/N: M83528 011X <sup>†</sup> -( )	Nominal Dimensions	
	A	B
19-04-14930-XXXX <sup>4</sup>	0.151 (3.84)	0.094 (2.39)
19-04-13545-XXXX <sup>2,3,4</sup>	0.153 (3.89)	0.115 (2.92)
10-04-4180-XXXX (002)	0.156 (3.96)	0.050 (1.27)
10-04-9732-XXXX <sup>4</sup>	0.156 (3.96)	0.080 (2.03)
19-04-11213-XXXX <sup>2,3,4</sup>	0.172 (4.37)	0.140 (3.56)
19-04-11293-XXXX <sup>2,3,4</sup>	0.175 (4.45)	0.144 (3.66)
10-04-8133-XXXX (008)	0.177 (4.50)	0.079 (2.01)
19-04-11415-XXXX	0.177 (4.50)	0.079 (2.01)
19-04-13189-XXXX <sup>4</sup>	0.177 (4.50)	0.110 (2.79)
19-04-11214-XXXX <sup>4</sup>	0.180 (4.57)	0.140 (3.56)
19-04-14537-XXXX <sup>4</sup>	0.189 (4.80)	0.111 (2.82)
10-04-4254-XXXX	0.190 (4.83)	0.080 (2.03)
19-04-12015-XXXX	0.207 (5.26)	0.077 (1.95)
19-04-15435-XXXX	0.207 (5.26)	0.090 (2.27)
19-04-E483-XXXX	0.210 (5.33)	0.093 (2.36)
19-04-15479-XXXX	0.210 (5.33)	0.120 (3.05)
19-04-C627-XXXX	0.216 (5.49)	0.090 (2.27)
10-04-2737-XXXX (003)	0.250 (6.35)	0.125 (3.18)
19-04-15434-XXXX	0.250 (6.35)	0.140 (3.56)
19-04-15443-XXXX <sup>4</sup>	0.250 (6.35)	0.187 (4.75)
19-04-14349-XXXX <sup>4</sup>	0.250 (6.35)	0.200 (5.08)
19-04-W049-XXXX	0.290 (7.36)	0.156 (3.96)
10-04-3221-XXXX	0.290 (7.36)	0.175 (4.45)
10-04-3004-XXXX (004)	0.312 (7.92)	0.192 (4.88)
19-04-13759-XXXX	0.348 (8.84)	0.250 (6.35)
19-04-14292-XXXX	0.373 (9.47)	0.200 (5.08)
10-04-3122-XXXX (005)	0.375 (9.53)	0.250 (6.35)
19-04-14467-XXXX	0.394 (10.01)	0.253 (6.43)
19-04-14290-XXXX	0.404 (10.26)	0.243 (6.17)
19-04-14291-XXXX	0.405 (10.29)	0.223 (5.66)
19-04-12338-XXXX	0.430 (10.92)	0.330 (8.38)
10-04-4034-XXXX	0.437 (11.10)	0.347 (8.81)
19-04-14731-XXXX	0.438 (11.13)	0.275 (6.99)
19-04-14138-XXXX	0.440 (11.18)	0.280 (7.11)
19-04-14261-XXXX	0.461 (11.71)	0.295 (7.49)
19-04-14139-XXXX	0.461 (11.71)	0.315 (8.00)
10-04-3649-XXXX	0.470 (11.94)	0.345 (8.76)
10-04-5572-XXXX	0.500 (12.70)	0.385 (9.78)
19-04-11651-XXXX	0.524 (13.31)	0.315 (8.00)
10-04-4155-XXXX	0.555 (14.10)	0.425 (10.80)
10-04-5515-XXXX	0.562 (14.27)	0.437 (11.10)

continued

Additional sizes may be available. Please inquire.

Table 8 continued

HOLLOW O-STRIPS		
Chomerics P/N* MIL P/N: M83528 011X <sup>†</sup> -( )	Nominal Dimensions	
	A	B
19-04-13764-XXXX	0.620 (15.75)	0.250 (6.35)
10-04-5516-XXXX	0.620 (15.75)	0.515 (13.08)
19-04-15181-XXXX	0.625 (15.88)	0.250 (6.35)
19-04-14326-XXXX	0.630 (16.00)	0.340 (8.64)
10-04-3652-XXXX	0.650 (16.51)	0.520 (13.21)
19-04-15342-XXXX	1.058 (26.87)	0.918 (23.32)

\* Replace XXXX with four or five digit material number (1356, 1273, S6305, etc.). Smallest sizes may not be extrudable in certain materials. For explanation of superscript codes following XXXX, which indicate non-availability, refer to page 38.

† "X" should be replaced by applicable MIL-G-83528B material type (e.g., A, B, C, etc.). Number in parentheses is MIL-G-83528B dash number, which should be inserted (without parentheses) at end of MIL P/N.

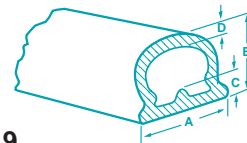


Table 9

"MUSHROOM" D-STRIPS <sup>†</sup>				
Chomerics P/N*	Nominal Dimensions			
	A	B	C	D
19-09-16503-XXXX <sup>4</sup>	0.265 (6.73)	0.312 (7.92)	0.113 (2.87)	0.040 (1.02)
19-09-16802-XXXX	0.315 (8.00)	0.301 (7.65)	0.109 (2.77)	0.053 (1.35)
19-05-14587-XXXX	0.487 (12.37)	0.324 (8.23)	0.115 (2.92)	0.050 (1.27)
19-09-14377-XXXX	0.625 (15.88)	0.375 (9.53)	0.106 (2.69)	0.057 (1.45)
19-09-14926-XXXX	0.625 (15.88)	0.400 (10.16)	0.106 (2.69)	0.057 (1.45)
19-09-15486-XXXX	0.846 (21.49)	0.472 (11.99)	0.120 (3.05)	0.053 (1.35)
19-09-15523-XXXX	0.890 (22.61)	0.730 (18.54)	0.183 (4.65)	0.065 (1.65)

† U.S. Patent No. 06075205

\* Replace XXXX with four or five digit material number (1356, 1273, S6305, etc.). Smallest sizes may not be extrudable in certain materials. For explanation of superscript codes following XXXX, which indicate non-availability, refer to page 38.

**Pressure-Sensitive Adhesive** is available on any extrusion with a minimum 0.125 inch (3.17 mm) mating surface. Contact Chomerics to obtain modified Part Numbers. Refer to pages 38 and 40 for details.

continued

(mm dimensions in parentheses)

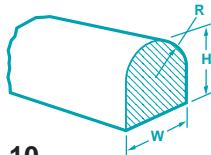


Table 10

SOLID D-STRIPS					
Chomerics P/N* MIL P/N: M83528 003X <sup>†</sup> -( )	Nominal Dimensions			"Rule of Thumb" Groove Dimensions <sup>††</sup>	
	H	W	R(rad.)	Depth	Width
19-05-14769-XXXX <sup>3,4</sup>	0.062 (1.57)	0.035 (0.89)	0.018 (0.46)	0.028 (0.71)	0.076 (1.93)
10-05-5589-XXXX <sup>4</sup>	0.064 (1.63)	0.055 (1.40)	0.031 (0.79)	0.052 (1.32)	0.077 (1.96)
10-05-Z337-XXXX <sup>4</sup>	0.075 (1.90)	0.060 (1.52)	0.030 (0.76)	0.062 (1.57)	0.089 (2.26)
10-05-1362-XXXX	0.068 (1.73)	0.062 (1.57)	0.031 (0.79)	0.056 (1.42)	0.084 (2.13)
19-05-E163-XXXX	0.074 (1.88)	0.062 (1.57)	0.031 (0.78)	0.061 (1.55)	0.088 (2.23)
19-05-12883-XXXX	0.085 (2.16)	0.062 (1.57)	0.031 (0.78)	0.072 (1.83)	0.088 (2.23)
10-05-4699-XXXX	0.100 (2.54)	0.062 (1.57)	0.031 (0.79)	0.085 (2.16)	0.081 (2.06)
19-05-12887-XXXX <sup>4</sup>	0.055 (1.40)	0.064 (1.62)	0.032 (0.81)	0.044 (1.12)	0.101 (2.57)
10-05-E205-XXXX	0.095 (2.41)	0.070 (1.78)	0.035 (0.89)	0.081 (2.06)	0.097 (2.46)
10-05-1363-XXXX (003)	0.089 (2.26)	0.078 (1.98)	0.039 (0.99)	0.074 (1.88)	0.101 (2.57)
19-05-C497-XXXX	0.070 (1.78)	0.080 (2.03)	0.040 (1.02)	0.058 (1.47)	0.116 (2.95)
19-05-E329-XXXX	0.090 (2.29)	0.080 (2.03)	0.040 (1.02)	0.076 (1.93)	0.111 (2.82)
19-05-12888-XXXX	0.081 (2.06)	0.088 (2.23)	0.044 (1.12)	0.068 (1.73)	0.123 (3.12)
19-05-A611-XXXX	0.134 (3.40)	0.091 (2.31)	0.045 (1.14)	0.117 (2.97)	0.118 (3.00)
10-05-3224-XXXX (002)	0.078 (1.98)	0.094 (2.39)	0.047 (1.19)	0.065 (1.65)	0.115 (2.92)
19-05-Z586-XXXX (004)	0.094 (2.39)	0.094 (2.39)	0.047 (1.19)	0.080 (2.03)	0.128 (3.25)
19-05-C128-XXXX	0.115 (2.92)	0.102 (2.60)	0.051 (1.30)	0.099 (2.51)	0.134 (3.40)
10-05-1499-XXXX (008)	0.156 (3.96)	0.118 (3.00)	0.059 (1.50)	0.137 (3.48)	0.136 (3.45)
10-05-A283-XXXX	0.131 (3.33)	0.122 (3.10)	0.061 (1.55)	0.114 (2.90)	0.156 (3.96)
10-05-1364-XXXX (007)	0.135 (3.43)	0.122 (3.10)	0.061 (1.55)	0.118 (3.00)	0.140 (3.56)
19-05-F364-XXXX	0.135 (3.43)	0.124 (3.15)	0.062 (1.57)	0.118 (3.00)	0.158 (4.01)
19-05-F084-XXXX	0.125 (3.18)	0.125 (3.18)	0.062 (1.57)	0.108 (2.74)	0.161 (4.09)

Table 10 *continued*

SOLID D-STRIPS					
Chomerics P/N* MIL P/N: M83528 003X <sup>†</sup> -( )	Nominal Dimensions			"Rule of Thumb" Groove Dimensions <sup>††</sup>	
	H	W	R(rad.)	Depth	Width
10-05-2618-XXXX (006)	0.110 (2.79)	0.150 (3.81)	0.075 (1.91)	0.095 (2.41)	0.165 (4.19)
19-05-F173-XXXX (009)	0.156 (3.96)	0.156 (3.96)	0.078 (1.98)	0.137 (3.48)	0.194 (4.93)
10-05-1577-XXXX (010)	0.175 (4.45)	0.178 (4.52)	0.089 (2.26)	0.154 (3.91)	0.195 (4.95)
19-05-A381-XXXX	0.200 (5.08)	0.187 (4.75)	0.093 (2.36)	0.177 (4.50)	0.228 (5.79)
19-05-12899-XXXX	0.205 (5.21)	0.187 (4.75)	0.093 (2.36)	0.179 (4.55)	0.234 (5.94)
19-05-W469-XXXX (011)	0.188 (4.78)	0.188 (4.78)	0.094 (2.39)	0.166 (4.22)	0.229 (5.82)
19-05-12890-XXXX	0.324 (8.23)	0.487 (12.37)	0.243 (6.17)	0.289 (7.34)	0.577 (14.66)

\* Replace XXXX with four or five digit material number (1356, 1273, S6305, etc.). Smallest sizes may not be extrudable in certain materials. For explanation of superscript codes following XXXX, which indicate non-availability, refer to page 38.

† "X" should be replaced by applicable MIL-G-83528B material type (e.g., A, B, C, etc.). Number in parentheses is MIL-G-83528B dash number, which should be inserted (without parentheses) at end of MIL P/N.

†† **Note:** The groove dimensions recommended assume groove tolerance of ±0.002" (0.05 mm) for standard solid O- and D-strips. Closure forces are assumed to provide maximum and uniform gasket deflection. If these conditions are not attainable, contact Chomerics' Applications Engineering Department before ordering.

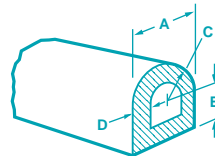


Table 11

HOLLOW D-STRIPS				
Chomerics P/N* MIL P/N: M83528 007X <sup>†</sup> -( )	Nominal Dimensions			
	A	B	C (rad.)	D
19-05-15343-XXXX	0.125 (3.18)	0.094 (2.39)	0.062 (1.58)	0.040 (1.02)
19-05-14960-XXXX <sup>2,3,4</sup>	0.157 (3.99)	—	0.086 (2.18)	0.020 (0.51)
10-05-6419-XXXX (001)	0.156 (3.96)	0.078 (1.98)	0.078 (1.98)	0.045 (1.14)
10-05-4202-XXXX (002)	0.187 (4.75)	0.093 (2.36)	0.093 (2.36)	0.050 (1.27)
19-05-X254-XXXX <sup>4</sup>	0.187 (4.75)	0.134 (3.43)	0.093 (2.36)	0.040 (1.02)
19-04-11231-XXXX	0.207 (5.26)	0.084 (2.13)	0.103 (2.62)	0.050 (1.27)

**Pressure-Sensitive Adhesive** is available on any extrusion with a minimum 0.125 inch (3.17 mm) mating surface. Contact Chomerics to obtain modified Part Numbers. Refer to pages 38 and 40 for details.

(mm dimensions in parentheses)

Additional sizes may be available. Please inquire.

Table 11 continued

HOLLOW D-STRIPS				
Chomerics P/N* MIL P/N: M83528 007X†-( )	Nominal Dimensions			
	A	B	C (rad.)	D
19-05-11440-XXXX <sup>4</sup>	0.246 (6.25)	0.020 (0.51)	0.125 (3.18)	0.030 (0.76)
10-05-6991-XXXX	0.250 (6.35)	0.125 (3.18)	0.125 (3.18)	0.062 (1.57)
10-05-6394-XXXX (007)	0.250 (6.35)	0.125 (3.18)	0.125 (3.18)	0.065 (1.65)
19-05-10277-XXXX <sup>4</sup>	0.296 (7.52)	0.015 (0.38)	0.172 (4.37)	0.030 (0.76)
19-05-L467-XXXX	0.296 (7.52)	0.015 (0.38)	0.172 (4.37)	0.050 (1.27)
10-05-3369-XXXX†† (004)	0.312 (7.92)	0.156 (3.96)	0.156 (3.96)	0.062 (1.57)
10-05-4308-XXXX (003)	0.312 (7.92)	0.156 (3.96)	0.156 (3.96)	0.062 (1.57)
10-05-4318-XXXX** (005)	0.312 (7.92)	0.200 (5.08)	0.112 (2.84)	0.062 (1.57)
19-05-16720-XXXX <sup>4</sup>	0.400 (10.16)	0.025 (0.64)	0.205 (5.21)	0.035 (0.89)
19-05-12066-XXXX	0.487 (12.37)	0.080 (2.03)	0.244 (6.20)	0.045 (1.14)
19-05-16657-XXXX	0.487 (12.36)	0.080 (2.03)	0.244 (6.20)	0.055 (1.40)
19-05-12375-XXXX	0.487 (12.37)	0.080 (2.03)	0.244 (6.20)	0.062 (1.57)
10-05-4542-XXXX (006)	0.487 (12.37)	0.080 (2.03)	0.244 (6.20)	0.080 (2.03)
10-05-C589-XXXX	0.488 (12.40)	0.068 (1.73)	0.244 (6.20)	0.055 (1.40)
10-05-C038-XXXX	0.488 (12.40)	0.080 (2.03)	0.244 (6.20)	0.080 (2.03)
19-05-E429-XXXX	0.502 (12.75)	0.250 (6.35)	0.250 (6.35)	0.061 (1.55)
10-05-4282-XXXX	0.700 (17.78)	0.250 (6.35)	0.350 (8.89)	0.100 (2.54)
19-05-13856-XXXX	0.750 (19.05)	0.375 (9.53)	0.375 (9.53)	0.050 (12.70)
19-05-L362-XXXX	0.750 (19.05)	0.375 (9.53)	0.375 (9.53)	0.075 (1.91)
19-05-W379-XXXX	0.975 (24.77)	0.132 (3.35)	0.488 (12.40)	0.093 (2.36)

\* Replace XXXX with four or five digit material number (1356, 1273, S6305, etc.). Smallest sizes may not be extrudable in certain materials. For explanation of superscript codes following XXXX, which indicate non-availability, refer to page 38.

\*\* Dimension "A" measured at bottom (width narrows to become tangent to "C" radius).

† "X" should be replaced by applicable MIL-G-83528B material type (e.g., A, B, C, etc.). Number in parentheses is MIL-G-83528B dash number, which should be inserted (without parentheses) at end of MIL P/N.

†† Includes internal radii for low closure properties.

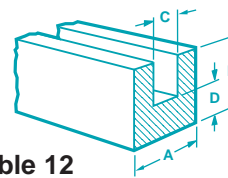


Table 12

CHANNEL STRIPS				
Chomerics P/N* MIL P/N: M83528 010X†-( )	Nominal Dimensions			
	A	B	C	D
19-08-14054-XXXX <sup>4</sup>	0.075 (1.91)	0.099 (2.51)	0.025 (0.64)	0.032 (0.81)
10-08-6475-XXXX <sup>4</sup> (001)	0.100 (2.54)	0.100 (2.54)	0.034 (0.86)	0.033 (0.84)
19-08-12880-XXXX <sup>4</sup>	0.126 (3.20)	0.078 (1.98)	0.044 (1.12)	0.048 (1.22)
19-08-12881-XXXX <sup>4</sup>	0.126 (3.20)	0.099 (2.51)	0.047 (1.19)	0.059 (1.50)
10-08-8340-XXXX <sup>4</sup>	0.126 (3.20)	0.097 (2.46)	0.026 (0.66)	0.037 (0.94)
10-08-3215-XXXX (002)	0.126 (3.20)	0.110 (2.79)	0.025 (0.64)	0.050 (1.27)
10-08-4315-XXXX (003)	0.126 (3.20)	0.225 (5.72)	0.020 (0.51)	0.075 (1.91)
19-08-12882-XXXX <sup>4</sup>	0.154 (3.91)	0.154 (3.91)	0.082 (2.08)	0.088 (2.24)
10-08-3157-XXXX (004)	0.156 (3.96)	0.156 (3.96)	0.062 (1.57)	0.047 (1.19)
19-08-12844-XXXX	0.156 (3.96)	0.175 (4.45)	0.046 (1.17)	0.075 (1.90)
10-08-3253-XXXX (005)	0.175 (4.45)	0.156 (3.96)	0.047 (1.19)	0.075 (1.91)
10-08-F815-XXXX	0.188 (4.78)	0.188 (4.78)	0.062 (1.57)	0.062 (1.57)
19-08-12884-XXXX <sup>4</sup>	0.193 (4.90)	0.193 (4.90)	0.128 (3.25)	0.064 (1.62)
19-08-12158-XXXX <sup>4</sup>	0.250 (6.35)	0.250 (6.35)	0.170 (4.32)	0.062 (1.57)
19-08-C929-XXXX	0.250 (6.35)	0.250 (6.25)	0.130 (3.30)	0.062 (1.57)
19-08-12885-XXXX	0.260 (6.60)	0.184 (4.67)	0.140 (3.56)	0.062 (1.57)
19-08-12886-XXXX	0.320 (8.13)	0.315 (8.00)	0.193 (4.90)	0.197 (5.00)
10-08-3872-XXXX** (006)	0.327 (8.31)	0.235 (5.97)	0.062 (1.57)	0.115 (2.92)
19-08-E622-XXXX	0.375 (9.53)	0.500 (12.7)	0.187 (4.75)	0.125 (3.18)

\* Replace XXXX with four or five digit material number (1356, 1273, S6305, etc.). Smallest sizes may not be extrudable in certain materials. For explanation of superscript codes following XXXX, which indicate non-availability, refer to page 38.

\*\* Slot not centered. Centerline of slot is 0.167 in. (4.24mm) from left edge.

† "X" should be replaced by applicable MIL-G-83528B material type (e.g., A, B, C, etc.). Number in parentheses is MIL-G-83528B dash number, which should be inserted (without parentheses) at end of MIL P/N.

continued

**Pressure-Sensitive Adhesive** is available on any extrusion with a minimum 0.125 inch (3.17 mm) mating surface. Contact Chomerics to obtain modified Part Numbers. Refer to pages 38 and 40 for details.

(mm dimensions in parentheses)



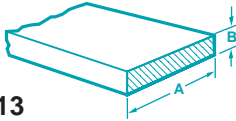


Table 13

RECTANGULAR STRIPS		
Chomerics P/N* MIL P/N: M83528 009X†-( )	Nominal Dimensions	
	A	B
19-07-12947-XXXX <sup>4</sup>	0.041 (1.04)	0.031 (0.78)
10-07-4272-XXXX <sup>4</sup> (001)	0.063 (1.60)	0.042 (1.07)
19-07-12948-XXXX	0.085 (2.16)	0.085 (2.16)
19-07-F193-XXXX	0.093 (2.36)	0.093 (2.36)
10-07-2981-XXXX (002)	0.095 (2.41)	0.062 (1.57)
19-07-12949-XXXX	0.095 (2.41)	0.062 (1.57)
19-07-Z499-XXXX <sup>4</sup>	0.114 (2.89)	0.039 (0.99)
19-07-Z500-XXXX	0.114 (2.89)	0.091 (2.31)
19-07-11206-XXXX <sup>4</sup>	0.120 (3.05)	0.040 (1.02)
10-07-4014-XXXX (003)	0.120 (3.05)	0.075 (1.91)
10-07-3225-XXXX (004)	0.125 (3.18)	0.062 (1.57)
19-07-12950-XXXX	0.125 (3.18)	0.062 (1.57)
19-07-12951-XXXX	0.126 (3.20)	0.126 (3.20)
10-07-3047-XXXX (005)	0.156 (3.96)	0.062 (1.57)
10-07-C786-XXXX	0.170 (4.32)	0.125 (3.18)
19-07-F463-XXXX	0.188 (4.78)	0.062 (1.57)
19-07-12952-XXXX	0.188 (4.78)	0.080 (2.03)
19-07-12953-XXXX	0.188 (4.78)	0.093 (2.36)
19-07-13026-XXXX	0.188 (4.78)	0.125 (3.18)
19-07-F627-XXXX	0.219 (5.56)	0.156 (3.96)
10-07-3226-XXXX (006)	0.250 (6.35)	0.062 (1.57)
19-07-12954-XXXX	0.255 (6.47)	0.063 (1.60)
19-07-12955-XXXX	0.330 (8.38)	0.305 (7.75)
10-07-F743-XXXX	0.375 (9.53)	0.060 (1.52)
19-07-L463-XXXX	0.390 (9.91)	0.062 (1.57)
19-07-14592-XXXX	0.438 (11.13)	0.188 (4.78)
19-07-12675-XXXX <sup>4</sup>	0.500 (12.70)	0.040 (1.02)
19-07-12200-XXXX	0.500 (12.70)	0.062 (1.57)
10-07-3522-XXXX (007)	0.500 (12.70)	0.075 (1.91)
19-07-12491-XXXX	0.500 (12.70)	0.093 (2.36)
10-07-4217-XXXX (008)	0.500 (12.70)	0.125 (3.18)
10-07-3080-XXXX (009)	0.500 (12.70)	0.188 (4.78)
10-07-B447-XXXX	0.500 (12.70)	0.250 (6.35)
19-07-12956-XXXX	0.508 (12.90)	0.063 (1.60)
19-07-12957-XXXX	0.564 (14.32)	0.127 (3.23)
19-07-12958-XXXX	0.569 (14.45)	0.062 (1.57)
19-07-12877-XXXX	0.620 (15.75)	0.125 (3.18)
19-07-12959-XXXX	0.640 (16.25)	0.060 (1.52)
19-07-15118-XXXX <sup>4</sup>	0.750 (19.05)	0.032 (0.81)
10-07-4483-XXXX (010)	0.750 (19.05)	0.062 (1.57)

*continued*

Additional sizes may be available. Please inquire.

Table 13 *continued*

RECTANGULAR STRIPS		
Chomerics P/N* MIL P/N: M83528 009X†-( )	Nominal Dimensions	
	A	B
19-07-11294-XXXX	0.750 (19.05)	0.062 (1.57)
19-07-11079-XXXX	0.780 (19.81)	0.100 (2.54)
19-07-10959-XXXX <sup>4</sup>	0.870 (22.10)	0.032 (0.81)
19-07-L956-XXXX	0.875 (22.23)	0.312 (7.92)
19-07-14816-XXXX <sup>4</sup>	0.880 (22.35)	0.032 (0.81)
10-07-4523-XXXX (011)	0.880 (22.35)	0.062 (1.57)
19-07-11495-XXXX	0.880 (22.35)	0.125 (3.18)
19-07-8345-XXXX	0.980 (24.89)	0.125 (3.18)
19-07-M327-XXXX <sup>4</sup>	1.000 (25.40)	0.032 (0.81)
19-07-12960-XXXX <sup>4</sup>	1.000 (25.40)	0.033 (0.84)
19-07-11081-XXXX <sup>4</sup>	1.000 (25.40)	0.042 (1.06)
19-07-E431-XXXX	1.000 (25.40)	0.062 (1.57)
19-07-11080-XXXX	1.000 (25.40)	0.090 (2.28)
10-07-3797-XXXX (012)	1.000 (25.40)	0.250 (6.35)
10-07-L525-XXXX	1.120 (28.45)	0.060 (1.52)
10-07-4538-XXXX (013)	1.180 (29.97)	0.062 (1.57)
19-07-12961-XXXX	1.210 (30.73)	0.062 (1.57)
19-07-W391-XXXX	1.600 (40.64)	0.062 (1.57)
19-07-F067-XXXX	2.000 (50.80)	0.062 (1.57)

**Note:** Some configurations may have a degree of curvature, making them unsuitable in long lengths. Consult Chomerics Applications Engineering for details.

\* Replace XXXX with four or five digit material number (1356, 1273, S6305, etc.). Smallest sizes may not be extrudable in certain materials. For explanation of superscript codes following XXXX, which indicate non-availability, refer to page 38.

† "X" should be replaced by applicable MIL-G-83528B material type (e.g., A, B, C, etc.). Number in parentheses is MIL-G-83528B dash number, which should be inserted (without parentheses) at end of MIL P/N.

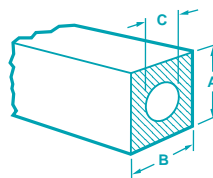


Table 14

HOLLOW RECTANGULAR STRIPS			
Chomerics P/N*	Nominal Dimensions		
	A	B	C (dia.)
19-07-13944-XXXX <sup>2,3,4</sup>	0.100 (2.54)	0.059 (1.50)	0.020 (0.51)
19-07-15804-XXXX <sup>4</sup>	0.126 (3.20)	0.126 (3.20)	0.048 (1.22)
10-07-2998-XXXX	0.305 (7.75)	0.330 (8.38)	0.125 (3.18)
10-07-4481-XXXX	0.375 (9.53)	0.375 (9.53)	0.188 (4.78)
10-07-E263-XXXX	0.500 (12.70)	0.500 (12.70)	0.250 (6.35)

\* Replace XXXX with four or five digit material number (1356, 1273, S6305, etc.). Smallest sizes may not be extrudable in certain materials. Refer to page 38.

**Pressure-Sensitive Adhesive** is available on any extrusion with a minimum 0.125 inch (3.17 mm) mating surface. Contact Chomerics to obtain modified Part Numbers. Refer to pages 38 and 40 for details.

(mm dimensions in parentheses)

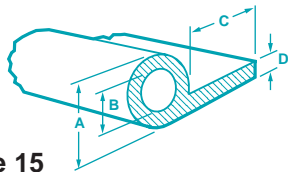


Table 15

HOLLOW P-STRIPS				
Chomerics P/N MIL P/N: M83528 008X <sup>†</sup> -( )	Nominal Dimensions			
	A (dia.)	B (dia.)	C	D
19-06-M151-XXXX <sup>4</sup>	0.125 (3.18)	0.045 (1.14)	0.250 (6.35)	0.062 (1.57)
19-06-Z731-XXXX <sup>4</sup>	0.140 (3.56)	0.100 (2.54)	0.135 (3.43)	0.030 (0.76)
19-06-C442-XXXX <sup>4</sup>	0.164 (4.17)	0.084 (2.13)	0.040 (1.02)	0.095 (2.41)
10-06-M412-XXXX	0.168 (4.26)	0.047 (1.19)	0.200 (5.08)	0.062 (1.57)
19-06-12931-XXXX	0.170 (4.32)	0.060 (1.52)	0.205 (5.21)	0.062 (1.57)
10-06-B227-XXXX <sup>4</sup>	0.190 (4.83)	0.130 (3.30)	0.312 (7.92)	0.062 (1.57)
19-06-13514-XXXX	0.200 (5.08)	0.080 (2.03)	0.125 (3.18)	0.062 (1.57)
10-06-A778-XXXX	0.200 (5.08)	0.080 (2.03)	0.215 (5.46)	0.062 (1.57)
10-06-8737-XXXX	0.200 (5.08)	0.080 (2.03)	0.250 (6.35)	0.062 (1.57)
10-06-8550-XXXX (007)	0.200 (5.08)	0.080 (2.03)	0.275 (6.99)	0.062 (1.57)
19-06-11223-XXXX	0.200 (5.08)	0.080 (2.03)	0.300 (7.62)	0.062 (1.57)
19-06-12942-XXXX	0.200 (5.08)	0.080 (2.03)	0.400 (10.16)	0.062 (1.57)
10-06-8560-XXXX	0.200 (5.08)	0.080 (2.03)	0.425 (10.80)	0.062 (1.57)
10-06-6175-XXXX	0.200 (5.08)	0.080 (2.03)	0.550 (13.97)	0.062 (1.57)
10-06-3599-XXXX (001)	0.200 (5.08)	0.080 (2.03)	0.650 (16.51)	0.062 (1.57)
19-06-13217-XXXX	0.200 (5.08)	0.125 (3.18)	0.650 (16.51)	0.062 (1.57)
10-06-4142-XXXX (002)	0.250 (6.35)	0.125 (3.18)	0.250 (6.35)	0.062 (1.57)
10-06-3300-XXXX (003)	0.250 (6.35)	0.125 (3.18)	0.375 (9.53)	0.062 (1.57)
10-06-6180-XXXX (008)	0.250 (6.35)	0.125 (3.18)	0.625 (15.88)	0.062 (1.57)
10-06-4921-XXXX (004)	0.250 (6.35)	0.150 (3.81)	0.375 (9.53)	0.062 (1.57)
10-06-C716-XXXX	0.254 (6.45)	0.153 (3.88)	0.254 (6.45)	0.062 (1.57)

continued

**Pressure-Sensitive Adhesive** is available on any extrusion with a minimum 0.125 inch (3.17 mm) mating surface. Contact Chomerics to obtain modified Part Numbers. Refer to pages 38 and 40 for details.

Table 15 continued

HOLLOW P-STRIPS				
Chomerics P/N MIL P/N: M83528 008X <sup>†</sup> -( )	Nominal Dimensions			
	A (dia.)	B (dia.)	C	D
10-06-5611-XXXX (005)	0.312 (7.92)	0.187 (4.75)	0.563 (14.30)	0.062 (1.57)
10-06-2750-XXXX (006)	0.360 (9.14)	0.255 (6.48)	0.420 (10.67)	0.070 (1.79)
19-08-L064-XXXX	0.600 (15.24)	0.400 (10.16)	0.350 (8.89)	0.110 (2.79)
19-06-15899-XXXX	0.610 (15.49)	0.350 (8.89)	0.875 (22.23)	0.130 (3.30)
19-06-11384-XXXX	0.750 (19.05)	0.625 (15.88)	0.725 (18.42)	0.062 (1.57)

\* Replace XXXX with four or five digit material number (1356, 1273, S6305, etc.). Smallest sizes may not be extrudable in certain materials. For explanation of superscript codes following XXXX, which indicate non-availability, refer to page 38.

<sup>†</sup> "X" should be replaced by applicable MIL-G-83528B material type (e.g., A, B, C, etc.). Number in parentheses is MIL-G-83528B dash number, which should be inserted (without parentheses) at end of MIL P/N.

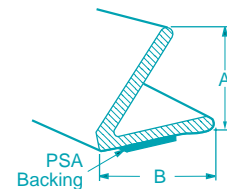


Table 16

V-STRIPS (ADHESIVE INCLUDED)		
Chomerics P/N*	A	B
19-09-15377-XXXX	0.396 (10.06)	0.375 (9.53)
10-09-W864-XXXX	0.410 (10.41)	0.500 (12.70)
19-09-14645-XXXX	0.600 (15.24)	0.500 (12.70)

**Note:** Please consult the factory for part numbers when ordering punched strips for fastener installation.

\* Replace XXXX with four or five digit material number (1356, 1273, S6305, etc.).

Additional sizes may be available. Please inquire.

(mm dimensions in parentheses)

# Custom Extrusions

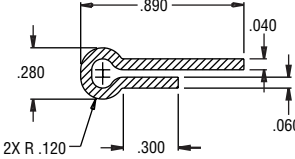
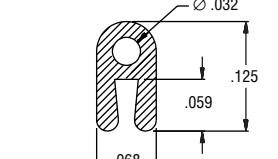
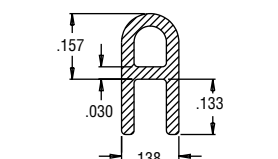
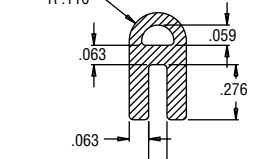
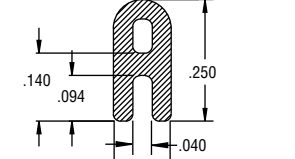
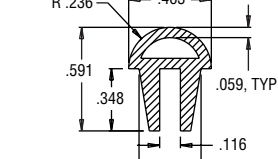
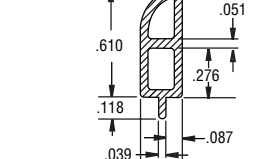
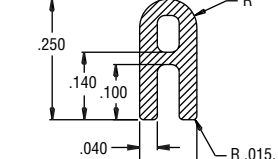
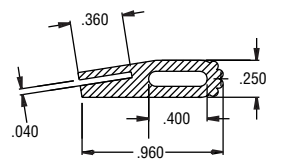
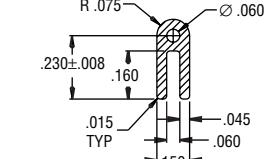
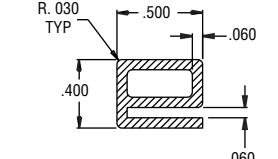
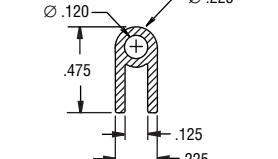
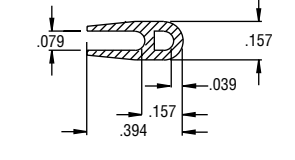
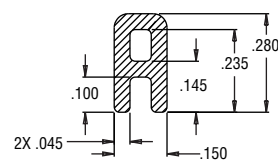
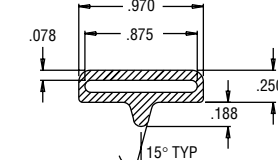
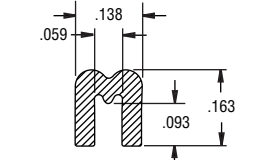
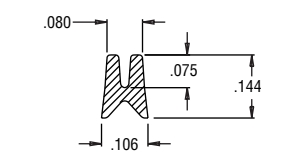
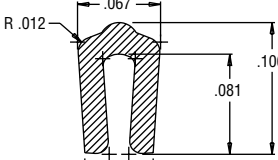
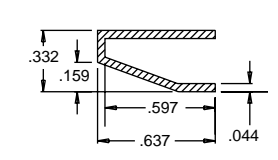
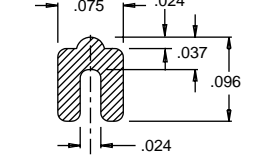
## Custom Extrusion Capabilities

As the world's leading supplier of conductive elastomer gaskets, Chomerics routinely supports its customers by producing extruded gaskets in special configurations. These

range from unusual sizes in standard shapes to highly complex designs that meet specialized shielding and environmental sealing requirements.

The following "showcase" includes representative examples of our custom extrusion capabilities. If you are

interested in adapting one of these shapes to your design, or developing an altogether new gasket design, contact our Applications Engineering Department. We welcome the opportunity to assist you.

<p><b>19-09-LF15-XXXX</b></p> 	<p><b>19-09-10076-XXXX</b></p> 	<p><b>19-09-10645-XXXX</b></p> 	<p><b>19-09-11540-XXXX</b></p> 
<p><b>19-09-13233-XXXX</b></p> 	<p><b>19-09-9325-XXXX</b></p> 	<p><b>19-09-C830-XXXX</b></p> 	<p><b>19-09-E053-XXXX</b></p> 
<p><b>19-09-E620-XXXX</b></p> 	<p><b>19-09-F948-XXXX</b></p> 	<p><b>19-09-L913-XXXX</b></p> 	<p><b>19-09-14446-XXXX</b></p> 
<p><b>19-09-M942-XXXX</b></p> 	<p><b>19-09-X962-XXXX</b></p> 	<p><b>19-09-M530-XXXX</b></p> 	<p><b>19-09-11860-XXXX</b></p> 
<p><b>19-09-10053-XXXX</b></p> 	<p><b>19-08-10873-XXXX</b></p> 	<p><b>19-08-11236-XXXX</b></p> 	<p><b>19-08-11240-XXXX</b></p> 

Dimensions shown in inches; 1 in. = 25.4 mm

<p><b>19-09-12023-XXXX</b></p>	<p><b>19-08-12057-XXXX</b></p>	<p><b>19-08-12876-XXXX</b></p>	<p><b>19-09-13209-XXXX</b></p>
<p><b>19-09-13456-XXXX</b></p>	<p><b>19-09-13835-XXXX</b></p>	<p><b>10-08-8754-XXXX</b></p>	<p><b>19-08-C127-XXXX</b></p>
<p><b>19-09-C369-XXXX</b></p>	<p><b>19-09-F534-XXXX</b></p>	<p><b>19-09-LA06-XXXX</b></p>	<p><b>19-09-LF59-XXXX</b></p>
<p><b>19-09-W795-XXXX</b></p>	<p><b>19-08-W805-XXXX</b></p>	<p><b>19-08-X175-XXXX</b></p>	<p><b>19-08-X179-XXXX</b></p>
<p><b>19-08-Z724-XXXX</b></p>	<p><b>19-09-15097-XXXX</b></p>	<p><b>19-09-W068-XXXX</b></p>	<p><b>19-09-12756-XXXX</b></p>
<p><b>19-09-12841-XXXX</b></p>	<p><b>19-09-13225-XXXX</b></p>	<p><b>19-09-14182-XXXX</b></p>	<p><b>10-09-9420-XXXX</b></p>
<p><b>19-09-C832-XXXX</b></p>	<p><b>19-09-LB02-XXXX</b></p>	<p><b>19-09-M615-XXXX</b></p>	<p><b>19-09-M531-XXXX</b></p>

Dimensions shown in inches; 1 in. = 25.4 mm

continued



<p><b>19-09-A593-XXXX</b></p>	<p><b>19-09-LE24-XXXX</b></p>	<p><b>19-09-A846-XXXX</b></p>	<p><b>19-09-11409-XXXX</b></p>
<p><b>19-05-4535-XXXX</b></p>	<p><b>19-09-E368-XXXX</b></p>	<p><b>10-09-11408-XXXX</b></p>	<p><b>19-09-11883-XXXX</b></p>
<p><b>19-09-12012-XXXX</b></p>	<p><b>19-09-E367-XXXX</b></p>	<p><b>10-09-A614-XXXX</b></p>	<p><b>19-05-11558-XXXX</b></p>
<p><b>19-09-10280-XXXX</b></p>	<p><b>10-09-A469-XXXX</b></p>	<p><b>19-09-LD90-XXXX</b></p>	<p><b>19-09-LD89-XXXX</b></p>
<p><b>19-09-13569-XXXX</b></p>	<p><b>19-07-A251-XXXX</b></p>	<p><b>19-09-10921-XXXX</b></p>	<p><b>19-09-11118-XXXX</b></p>
<p><b>19-09-11859-XXXX</b></p>	<p><b>19-09-11370-XXXX</b></p>	<p><b>19-04-11411-XXXX</b></p>	<p><b>19-04-12336-XXXX</b></p>
<p><b>19-09-13072-XXXX</b></p>	<p><b>19-09-14377-XXXX</b></p> <p>U.S. Patent No.06075205</p>	<p><b>19-09-14587-XXXX</b></p> <p>U.S. Patent No.06075205</p>	<p><b>19-09-14926-XXXX</b></p> <p>U.S. Patent No.06075205</p>

Dimensions shown in inches; 1 in. = 25.4 mm

<p><b>19-09-15245-XXXX</b></p>	<p><b>19-09-15486-XXXX</b></p> <p>U.S. Patent No.06075205</p>	<p><b>19-09-15523-XXXX</b></p> <p>U.S. Patent No.06075205</p>	<p><b>19-09-15904-XXXX</b></p> <p>U.S. Patent No.06075205</p>
<p><b>19-09-15905-XXXX</b></p> <p>U.S. Patent No.06075205</p>	<p><b>19-09-16503-XXXX</b></p> <p>U.S. Patent No.06075205</p>	<p><b>19-09-16610-XXXX</b></p>	<p><b>19-09-16802-XXXX</b></p> <p>U.S. Patent No.06075205</p>
<p><b>19-07-10696-XXXX</b></p>	<p><b>19-09-10810-XXXX</b></p>	<p><b>19-09-11219-XXXX</b></p>	<p><b>19-09-11277-XXXX</b></p>
<p><b>19-09-A150-XXXX</b></p>	<p><b>19-09-C264-XXXX</b></p>	<p><b>19-09-F204-XXXX</b></p>	<p><b>19-08-F464-XXXX</b></p>
<p><b>19-09-LB05-XXXX</b></p>	<p><b>19-09-LB67-XXXX</b></p>	<p><b>19-09-LE14-XXXX</b></p>	<p><b>19-09-LG41-XXXX</b></p>
<p><b>19-09-LJ16-XXXX</b></p>	<p><b>19-09-W089-XXXX</b></p>	<p><b>10-09-W300-XXXX</b></p>	<p><b>19-09-W321-XXXX</b></p>
<p><b>10-09-W949-XXXX</b></p>	<p><b>19-09-Z730-XXXX</b></p>	<p><b>19-09-14350-XXXX</b></p>	<p><b>19-09-14351-XXXX</b></p>

Dimensions shown in inches; 1 in. = 25.4 mm

continued

<p><b>19-09-14831-XXXX</b></p>	<p><b>19-06-15027-XXXX</b></p>	<p><b>19-09-15142-XXXX</b></p>	<p><b>19-09-15464-XXXX</b></p>
<p><b>19-09-15551-XXXX</b></p>	<p><b>19-09-F158-XXXX</b></p>	<p><b>19-09-LF60-XXXX</b></p>	<p><b>19-09-LF69-XXXX</b></p>
<p><b>19-09-15377-XXXX</b></p>	<p><b>19-09-10809-XXXX</b></p>	<p><b>19-09-10843-XXXX</b></p>	<p><b>19-09-11225-XXXX</b></p>
<p><b>19-09-11346-XXXX</b></p>	<p><b>19-06-11400-XXXX</b></p>	<p><b>10-09-11434-XXXX</b></p>	<p><b>19-09-11530-XXXX</b></p>
<p><b>19-09-11755-XXXX</b></p>	<p><b>19-08-12643-XXXX</b></p>	<p><b>19-09-13045-XXXX</b></p>	<p><b>19-09-13392-XXXX</b></p>
<p><b>19-08-3492-XXXX</b></p>	<p><b>19-09-8222-XXXX</b></p>	<p><b>19-05-9514-XXXX</b></p>	<p><b>19-09-A240-XXXX</b></p>
<p><b>19-09-B363-XXXX</b></p>	<p><b>19-09-C032-XXXX</b></p>	<p><b>19-09-C428-XXXX</b></p>	<p><b>19-09-C628-XXXX</b></p>

Dimensions shown in inches; 1 in. = 25.4 mm

<p><b>19-05-E328-XXXX</b></p>	<p><b>19-08-F676-XXXX</b></p>	<p><b>19-09-W517-XXXX</b></p>	<p><b>19-09-X681-XXXX</b></p>
<p><b>19-06-11864-XXXX</b></p>	<p><b>19-09-13946-XXXX</b></p>	<p><b>19-06-14313-XXXX</b></p>	<p><b>19-09-15380-XXXX</b></p>
<p><b>19-09-15786-XXXX</b></p>	<p><b>19-09-16750-XXXX</b></p>	<p><b>19-07-W470-XXXX</b></p>	<p><b>19-09-13997-XXXX</b></p>
<p><b>19-09-15562-XXXX</b></p>	<p><b>19-09-15862-XXXX</b></p>	<p><b>19-09-15895-XXXX</b></p>	<p><b>19-09-15937-XXXX</b></p>
<p><b>19-09-16047-XXXX</b></p>	<p><b>19-09-16072-XXXX</b></p>	<p><b>19-09-16166-XXXX</b></p>	<p><b>19-09-16336-XXXX</b></p>
<p><b>19-06-L386-XXXX</b></p>	<p><b>19-09-10357-XXXX</b></p>	<p><b>19-09-11261-XXXX</b></p>	<p><b>19-09-12999-XXXX</b></p>
<p><b>19-09-11367-XXXX</b></p>	<p><b>19-09-11389-XXXX</b></p>	<p><b>19-09-11735-XXXX</b></p>	<p><b>19-06-13540-XXXX</b></p>

Dimensions shown in inches; 1 in. = 25.4 mm

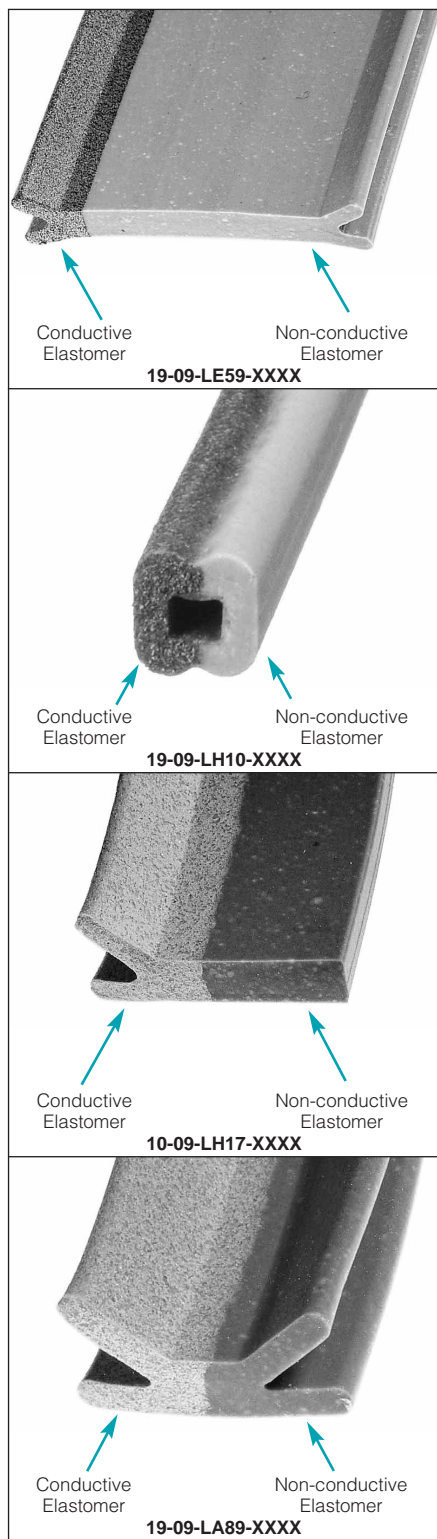
continued

<p><b>10-05-A967-XXXX</b></p>	<p><b>10-05-4035-XXXX</b></p>	<p><b>10-05-6221-XXXX</b></p>	<p><b>10-09-A575-XXXX</b></p>
<p><b>19-05-B254-XXXX</b></p>	<p><b>19-05-B247-XXXX</b></p>	<p><b>19-05-B250-XXXX</b></p>	<p><b>10-06-B252-XXXX</b></p>
<p><b>19-09-L798-XXXX</b></p>	<p><b>19-09-L524-XXXX</b></p>	<p><b>19-05-L547-XXXX</b></p>	<p><b>10-06-L564-XXXX</b></p>
<p><b>19-09-L957-XXXX</b></p>	<p><b>19-09-M619-XXXX</b></p>	<p><b>19-09-X318-XXXX</b></p>	<p><b>10-05-10648-XXXX</b></p>
<p><b>19-06-12489-XXXX</b></p>	<p><b>19-09-14757-XXXX</b></p>	<p><b>19-09-15111-XXXX</b></p>	<p><b>10-05-8635-XXXX</b></p>
<p><b>19-04-L453-XXXX</b></p>	<p><b>19-09-M928-XXXX</b></p>		

Dimensions shown in inches; 1 in. = 25.4 mm



# Co-Extruded Strips



## Co-Extruded Strips Optimum Shielding Performance Plus Corrosion Prevention

Chomerics manufactures a dual performance extruded gasket in one simple design. By a seam vulcanization process, CHO-SEAL or CHO-SIL conductive elastomers are extruded in parallel with non-conductive elastomers to provide EMI shielding and corrosion protection from one gasket. The outer, non-conductive gasket acts as an extra environmental seal to keep moisture away from the conductive gasket/flange interface. This prevents corrosion of the mating flange in marine or airborne environments. Co-extruded gaskets are also cost-effective, as they permit the use of existing flange designs and provide for gasket attachment via a less expensive non-conductive elastomer. A similar two gasket shielding system requires a costly double groove flange design.

### Technically Superior Design

Typical examples of effective co-extruded gaskets include commercial and military communications equipment, rack mounted cabinetry, and aircraft doors and panels. These applications vary in required shielding performance. Each Chomerics co-extruded gasket is engineered in our applications laboratory to match the geometric constraints, closure requirements and shielding performance demanded by the application.

### Availability

Many of the gasket cross section shapes and sizes listed on the previous pages can also be co-extruded. Common co-extruded configurations are pictured at left. Also refer to pages 56-57 for a selection of co-extruded shapes currently available. Contact Chomerics to assist you in material selection.

## Fast, Easy Conductive Elastomer Gasket Installation with Chomerics Adhesive Tape Attachment

Chomerics has developed a unique adhesive attachment material for CHO-SEAL or CHO-SIL conductive EMI gaskets. This non-conductive pressure-sensitive adhesive (PSA) tape is available on most extruded profiles with a flat tape attachment area, such as D-, P-, K- and rectangular cross sections.

**Application:** This method of gasket attachment is easy and effective with a clean surface. Simply clean the surface prior to mounting the gasket.\* Remove the release film and position the gasket using light pressure. When the gasket is properly positioned, firmly press onto the flange.

### Advantages

- Peel strength (90°) in excess of 4.5 pounds per inch of width (ppi)
- Available in continuous length or cut to length. (*Note:* Some cross sections cannot be packaged in continuous lengths.)
- Eliminates fasteners or other adhesives
- Can function as a “third hand” to facilitate difficult installations
- Available with fluorosilicones as a permanent attachment method
- Quick stick – readily adheres to clean surfaces
- Conformable adhesion to curved surfaces
- Resists humidity, moisture, natural elements
- Eliminates solvent emissions and long set-up times

### Disadvantages

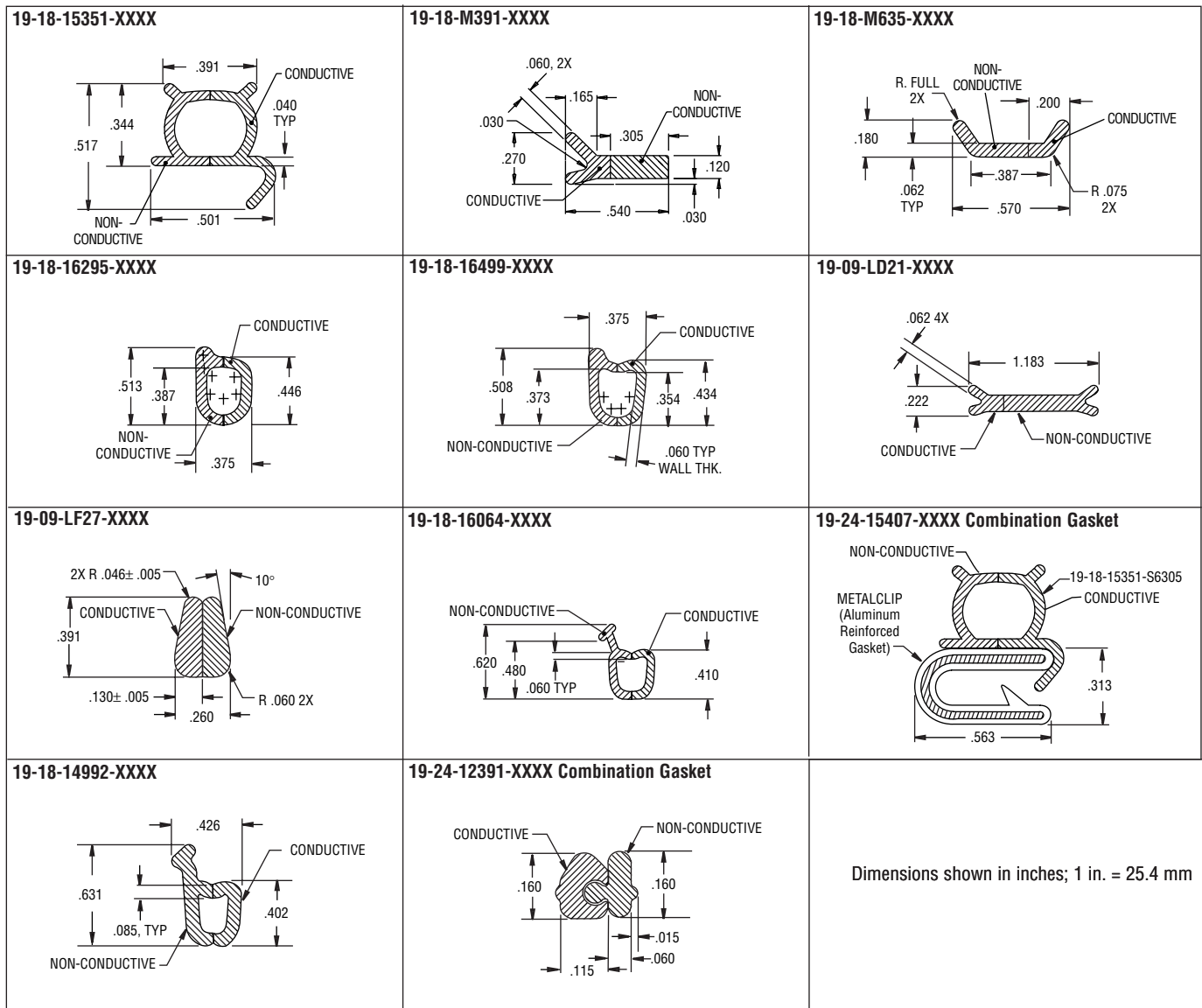
- Not available on round cross sections
- Not recommended for applications where solvent resistance is essential
- Not recommended for applications where resistance to excessive abuse due to moving parts or traffic is required

*continued*

**\* Note: Refer to “Surface Preparation of Metallic Substrates” on page 40 for important information on proper cleaning and application. Also request Technical Bulletin 20.**

<p><b>19-05-10168-XXXX</b></p>	<p><b>19-09-11771-XXXX</b></p>	<p><b>19-18-13715-XXXX</b></p>
<p><b>19-18-F566-XXXX</b></p>	<p><b>19-18-F775-XXXX</b></p>	<p><b>19-09-L628-XXXX</b></p>
<p><b>19-09-LD55-XXXX</b></p>	<p><b>19-09-LE59-XXXX</b></p>	<p><b>19-09-LH10-XXXX</b></p>
<p><b>19-18-LH27-XXXX</b></p>	<p><b>19-18-LJ12-XXXX</b></p>	<p><b>19-18-15489-XXXX</b></p>
<p><b>19-05-F011-XXXX</b></p>	<p><b>19-09-LA89-XXXX</b></p>	<p><b>19-18-15349-XXXX</b></p>
<p><b>19-09-X869-XXXX</b></p>	<p><b>19-09-Z721-XXXX</b></p>	<p><b>10-09-LH17-XXXX</b></p>

Dimensions shown in inches; 1 in. = 25.4 mm



## Custom Co-Extruded Gaskets

Extruded in parallel, dual conductive/non-conductive gaskets provide optimum EMI shielding and corrosion protection in a single, cost-effective design. For performance and cost advantages of this approach, refer to page 55. To discuss your requirements, contact our Applications Engineering Department.



# Sheet Stock & Die-Cut Parts

## Sheet Stock

Almost every Chomerics commercial-grade elastomer material is available in sheet form. We are able to meet most requirements with the standard sizes and thicknesses shown in Table 2. For sizes not shown, contact Chomerics' Sales Department.

## Adhesive Backing

All standard *silicone* sheets of 0.032 inch (0.81 mm) thickness or greater are available with a thin, non-conductive pressure-sensitive adhesive backing (PSA). This adhesive increases gasket volume resistivity and interface flange resistance, with a corresponding reduction in shielding effectiveness (generally 5-10 dB). Performance and property specifications included in this catalog are for materials without adhesive backing.

## Custom Die-Cut Parts

Custom parts can be die-cut by Chomerics or our Authorized Fabricators from any standard sheet stock. Please provide a sketch or drawing (see Table 1 for tolerances). Chomerics' part number for custom die-cut parts is

19-11-XXXX-ZZZZ

where XXXX is a sequential engineering drawing number assigned by Chomerics, and ZZZZ is the material designation (1350, S6304, etc.).

## Custom Sheets

For applications where standard CHO-SEAL and CHO-SIL sheets are not suitable, Chomerics can satisfy the following requirements:

1. Special materials can be compounded to provide specific physical or chemical properties.
2. Custom sizes can be molded from 0.020 inch (0.51 mm) to 0.125 inch (3.18 mm) for most CHO-SEAL materials. Minimum thickness for CHO-SIL 1485 is 0.032 inch (0.81 mm).
3. Custom sizes can be cut.



## Ordering Procedure

Select the part number from Table 2. The last four or five digits designate the material. For "TA" in the part number, select the desired thickness and adhesive option from the blocks below the table. *For custom sizes or thicknesses, part numbers will be assigned by Chomerics.*

## General Tolerances

The following table provides general tolerances for flat die-cut conductive elastomer gaskets. It is important to note that *all flat die-cut, molded, and extruded gaskets are subject to free-state variation in the unrestrained condition.* The use of inspection fixtures to verify conformance of finished parts is common and recommended where appropriate.

Also note that "Overall Dimensions" for flat die-cut gaskets include any feature-to-feature dimensions (e.g., edge-to-edge, edge-to-hole, hole-to-hole).

Table 1

FLAT DIE-CUT GASKETS <i>inch (mm)</i>	TOLERANCE
<b>Overall Dimensions</b>	
≤10 (254)	±0.010 (0.25)
>10 to ≤15 (254 to 381)	±0.020 (0.51)
>15 (>381)	±0.20% Nom. Dim.
<b>Thickness</b>	
0.020 (0.51)	±0.004 (0.10)
0.032 (0.81)	±0.005 (0.13)
0.045 (1.14)	±0.006 (0.15)
0.062 (1.57)	±0.007 (0.18)
0.093 (2.36)	±0.010 (0.25)
0.125 (3.18)	±0.010 (0.25)
>0.125 (>3.18)	Contact a Chomerics Applications or Sales Engineer
<b>Hole Diameters</b>	
>0.060 (1.52) dia. if sheet thickness is...	
≤0.062 (1.57)	±0.005 (0.13)
>0.062 (1.57)	±0.008 (0.20)

**Table 2**

STANDARD SHEET STOCK SIZE							
Part Number*	Sheet Size inches (cm)	AVAILABILITY BY THICKNESS					
		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-1010-1212	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-1212	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-1212	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-1212	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
40-TA-1010-1215	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-1215	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-1215	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-1215	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
40-TA-2030-1215	20 x 30 (50.8 x 76.2)	NA	✓	✓	✓	✓	✓
40-TO-1010-1217	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TO-1015-1217	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TO-1020-1217	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TO-1520-1217	15 x 20 (38.1 x 50.8)	NA	NA	NA	✓	✓	✓
40-TO-2030-1217	20 x 30 (50.8 x 76.2)	NA	NA	NA	✓	✓	✓
40-TO-1010-1221	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TO-1015-1221	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TO-1020-1221	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TO-1520-1221	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
40-TO-2030-1221	20 x 30 (50.8 x 76.2)	NA	✓	✓	✓	✓	✓
40-TA-1010-1224	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-1224	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-1224	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-1224	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
40-TA-2030-1224	20 x 30 (50.8 x 76.2)	NA	✓	✓	✓	✓	✓
40-TA-1010-1273	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-1273	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-1273	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-1273	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
40-TA-2030-1273	20 x 30 (50.8 x 76.2)	NA	✓	✓	✓	✓	✓
40-TA-1010-1285	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-1285	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-1285	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-1285	15 x 20 (38.1 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-2030-1285	20 x 30 (50.8 x 76.2)	✓	✓	✓	✓	✓	✓
40-TO-1010-1287	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TO-1015-1287	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TO-1020-1287	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TO-1520-1287	15 x 20 (38.1 x 50.8)	✓	NA	NA	✓	✓	✓
40-TA-1010-1291	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-1291	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-1291	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-1291	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
40-TA-2030-1291	20 x 30 (50.8 x 76.2)	NA	✓	✓	✓	✓	✓
40-TO-1010-1298	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TO-1015-1298	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TO-1020-1298	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TO-1520-1298	15 x 20 (38.1 x 50.8)	NA	NA	NA	✓	✓	✓
40-TA-1010-1310	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-1310	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-1310	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-1310	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
40-TA-2030-1310	20 x 30 (50.8 x 76.2)	NA	✓	✓	✓	✓	✓

✓ Available NA = Not Available  
 \* TA refers to thickness and adhesive options (at right).

For sizes other than those shown, change 5th through 8th digits in Part Number to reflect desired size (e.g., 0415 is a 4 in. x 15 in. size).

<p><b>THICKNESS, inch (mm)</b></p> <p><b>1</b> 0.020 (0.51)  <b>2</b> 0.032 (0.81)  <b>3</b> 0.062 (1.57)  <b>4</b> 0.093 (2.36)  <b>5</b> 0.125 (3.18)  <b>6</b> 0.045 (1.14)</p>	<p>T A</p> <p>← →</p>	<p><b>ADHESIVE (PSA)</b></p> <p><b>0</b> No Adhesive  <b>1</b> Adhesive Backing</p> <p>Adhesive is not available on fluorosilicone materials 1217, 1221, 1287, 1298, E6306, E6434, L6303, and V6433 or on CHO-SEAL 1501, or on any sheets thinner than 0.032 inch (0.81mm).</p>
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(mm dimensions in parentheses)

continued



**Table 2** *continued*

STANDARD SHEET STOCK SIZE							
Part Number*	Sheet Size inches (cm)	AVAILABILITY BY THICKNESS					
		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-1010-1350	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-1350	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-1350	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-1350	15 x 20 (38.1 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-2030-1350	20 x 30 (50.8 x 76.2)	✓	✓	✓	✓	✓	✓
41-TA-1010-1401	10 x 10 (25.4 x 25.4)	NA	✓	✓	✓	✓	✓
41-TA-1015-1401	10 x 15 (25.4 x 38.1)	NA	✓	✓	✓	✓	✓
41-TA-1020-1401	10 x 20 (25.4 x 50.8)	NA	✓	✓	✓	✓	✓
41-TA-1520-1401	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
41-TA-2030-1401	20 x 30 (50.8 x 76.2)	NA	✓	✓	✓	✓	✓
41-TA-1010-1485	10 x 10 (25.4 x 25.4)	NA	✓	✓	✓	✓	✓
41-TA-1015-1485	10 x 15 (25.4 x 38.1)	NA	✓	✓	✓	✓	✓
41-TA-1020-1485	10 x 20 (25.4 x 50.8)	NA	✓	✓	✓	✓	✓
41-TA-1520-1485	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
41-TA-2030-1485	20 x 30 (50.8 x 76.2)	NA	✓	✓	✓	✓	✓
43-TO-1010-1501	10 x 10 (25.4 x 25.4)	NA	✓	✓	✓	✓	✓
43-TO-1015-1501	10 x 15 (25.4 x 38.1)	NA	✓	✓	✓	✓	✓
40-TO-1010-E6306	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TO-1015-E6306	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TO-1020-E6306	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TO-1010-E6434	10 x 10 (25.4 x 25.4)	NA	✓	✓	✓	✓	✓
40-TO-1015-E6434	10 x 15 (25.4 x 38.1)	NA	✓	✓	✓	✓	✓
40-TO-1020-E6434	10 x 20 (25.4 x 50.8)	NA	✓	✓	✓	✓	✓
40-TO-1010-L6303	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TO-1015-L6303	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TO-1020-L6303	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TO-1520-L6303	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
40-TA-1010-S6304	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-S6304	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-S6304	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-S6304	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
40-TA-1010-S6305	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-S6305	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-S6305	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-S6305	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
40-TA-1010-6370	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-6370	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-6370	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-6370	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
40-TO-1010-V6433	10 x 10 (25.4 x 25.4)	NA	✓	✓	✓	✓	✓
40-TO-1015-V6433	10 x 15 (25.4 x 38.1)	NA	✓	✓	✓	✓	✓
40-TO-1020-V6433	10 x 20 (25.4 x 50.8)	NA	✓	✓	✓	✓	✓
40-TA-1010-S6600	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-S6600	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-S6600	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-S6600	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓
40-TA-1010-S6602	10 x 10 (25.4 x 25.4)	✓	✓	✓	✓	✓	✓
40-TA-1015-S6602	10 x 15 (25.4 x 38.1)	✓	✓	✓	✓	✓	✓
40-TA-1020-S6602	10 x 20 (25.4 x 50.8)	✓	✓	✓	✓	✓	✓
40-TA-1520-S6602	15 x 20 (38.1 x 50.8)	NA	✓	✓	✓	✓	✓

✓ Available NA = Not Available  
 \* TA refers to thickness and adhesive options (at right).  
 For sizes other than those shown, change 5th through 8th digits in Part Number to reflect desired size (e.g., 0415 is a 4 in. x 15 in. size).

**THICKNESS, inch (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 Adhesive Backing

Adhesive is not available on fluorosilicone materials 1217, 1221, 1287, 1298, E6306, E6434, L6303, and V6433 or on CHO-SEAL 1501, or on any sheets thinner than 0.032 inch (0.81mm).

(mm dimensions in parentheses)

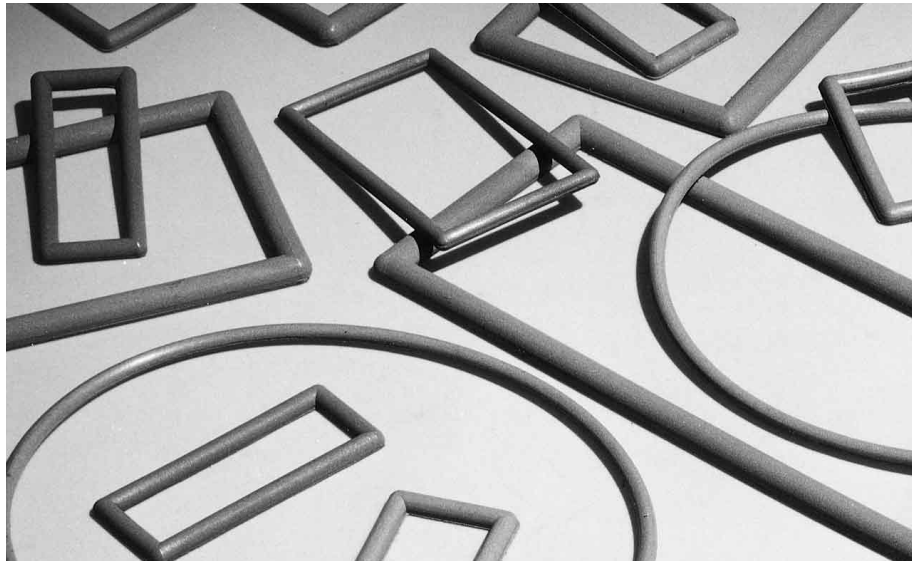
# Molded Shapes

## Standard Parts

Chomerics produces molded conductive elastomer EMI gaskets in hundreds of standard sizes in the following forms:

- Molded O- and D-rings, flat washers
- Connector Gaskets – Interfacial MS connector seals; D-subminiature rectangular; Jam-nut seals
- Waveguide Gaskets – Molded circular and rectangular (O or D cross section)

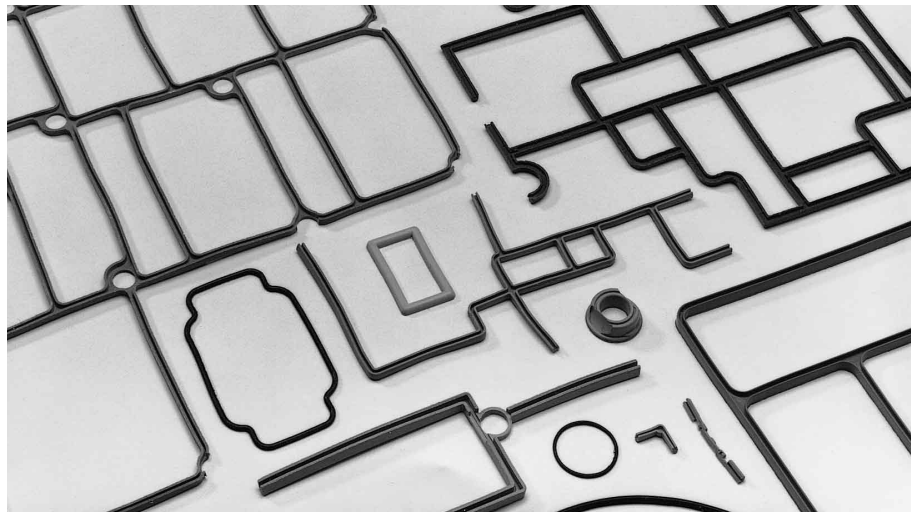
For complete specifications on these standard parts, including material selection, contact our Sales offices listed at the bottom of this page. **Note:** Tooling charges may be incurred for some parts.



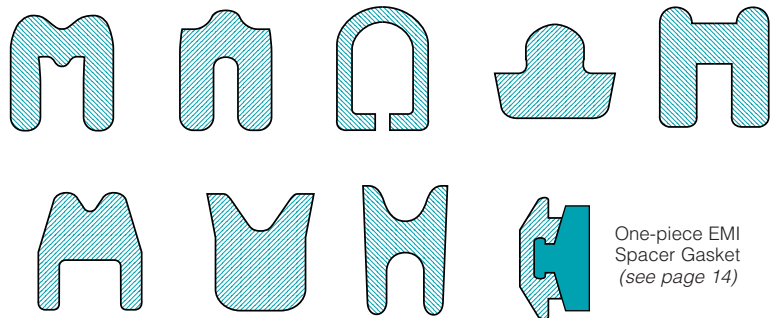
## Custom Molded Gaskets

Chomerics can mold conductive elastomer EMI gaskets to fit practically any application. With our range of high quality materials and efficient manufacturing systems we can provide attractive choices in price and performance. Chomerics engineers can rapidly optimize gasket designs, at little or no cost, using tools such as finite element analysis (see next page). Prototype development, tooling and part delivery are each performed to meet our customers' requirements, with adherence to the industry's highest quality standards.

Custom molded elastomer gaskets can include tight corners, retention bumps and other special geometries. Many other features can be added, such as fabric or mesh reinforcement, pressure-sensitive adhesive, fasteners and compression stops. Non-conductive silicone environmental seals can be bonded to or co-molded with conductive EMI shielding elastomers. Representative custom molded elastomer gasket parts are shown here. Contact Chomerics' Applications Engineering Department to discuss how custom molded conductive elastomer shapes can be designed to meet your application requirements.



### CROSS SECTIONS OF TYPICAL CUSTOM MOLDED EMI GASKETS



One-piece EMI Spacer Gasket (see page 14)

continued

## General Tolerances

The following table provides general tolerances for molded conductive elastomer gaskets. It is important to note that *all flat die-cut, molded, and extruded gaskets are subject to free-state variation in the unrestrained condition.* The use of inspection fixtures to verify conformance of finished parts is common and recommended where appropriate.

Also note that "Overall Dimensions" for molded gaskets includes any feature-

to-feature dimensions (e.g., edge-to-edge, edge-to-hole, hole-to-hole).

## Finite Element Analysis

Chomerics, a division of the Parker Hannifin Corporation's Seal Group, is the headquarters of Parker Seal's Elastomer Simulation Group. This unit specializes in elastomer finite element analysis (FEA), using the MARC K6 Series software as a foundation for FEA capability.

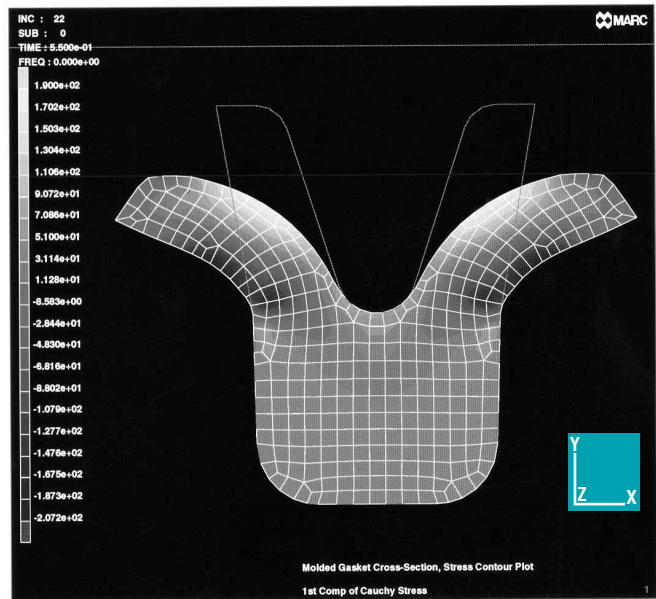
Benefits of FEA include:

- Optimizing elastomer gasket designs
- Allowing accurate predictions of alternate design concepts
- Eliminating extensive trial and error prototype evaluation.

**Table 1**

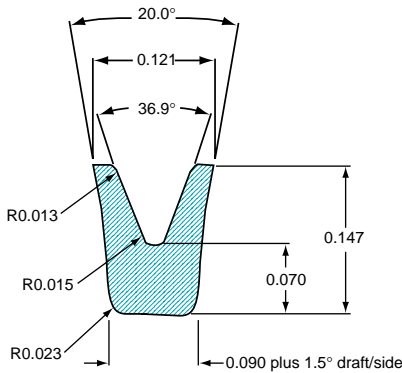
MOLDED GASKETS <i>inch (mm)</i>	TOLERANCE
<b>Overall Dimensions</b>	
0.100 to 1.500 (2.54 to 38.10)	±0.010 (0.25)
1.501 to 2.500 (38.13 to 63.50)	±0.015 (0.38)
2.501 to 4.500 (63.53 to 114.30)	±0.020 (0.51)
4.501 to 7.000 (114.33 to 177.80)	±0.025 (0.64)
>7.000 (>177.80)	±0.35% Nom. Dim.
<b>Cross Section</b>	
0.040 to 0.069 (1.02 to 1.75)	±0.003 (0.08)
0.070 to 0.100 (1.78 to 2.54)	±0.004 (0.11)
0.101 to 0.200 (2.57 to 5.08)	±0.005 (0.13)
0.201 to 0.350 (5.11 to 8.89)	±0.008 (0.20)
<b>Flash Tolerance</b>	
	0.005 (0.13) Max. Thickness
	0.008 (0.20) Max. Extension

**Molded Gasket Cross Section, Nominal Squeeze  
1st Comp of Cauchy Stress**

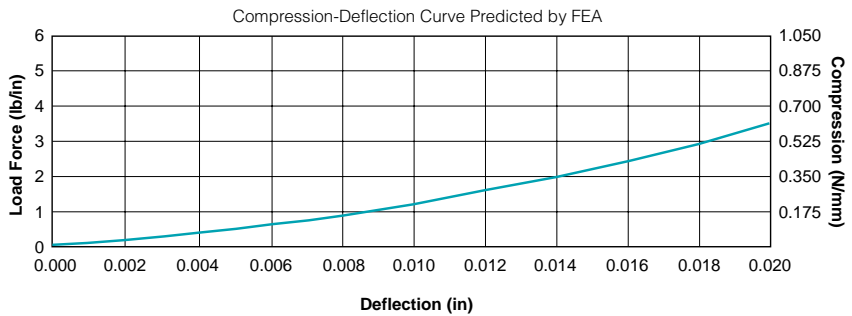


**Figure 1a**

**Figures 1a-c** A typical use of FEA in designing molded gaskets is the evaluation of force and deflection needs for proposed designs. The FEA shown in Figure 1a below, performed on the cross section in 1b, predicts the gasket's deflection characteristics and compression requirements. Results are plotted in 1c.



**Figure 1b**



**Figure 1c**

# Molded D- and O-Rings

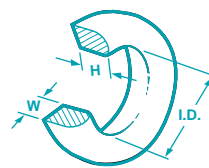
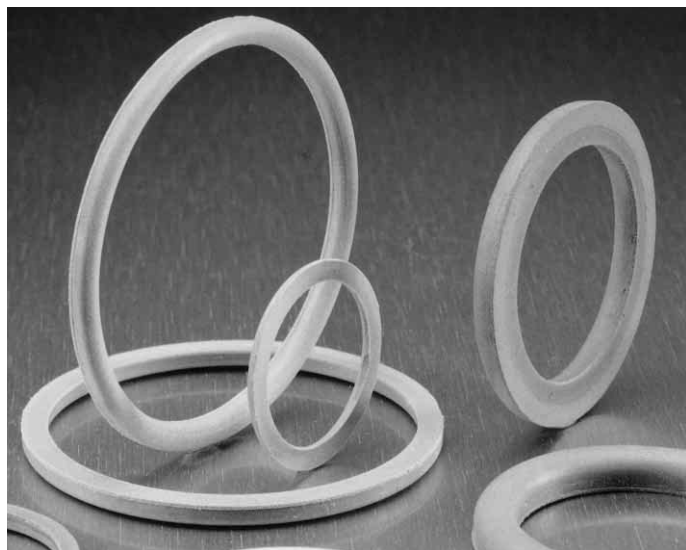


Table 2

D-RINGS			
Chomerics P/N*	Nominal Dimensions		
	H	W	I.D.
10-01-6515-XXXX	0.048 (1.22)	0.078 (1.98)	0.587 (14.91)
10-01-1238-XXXX	0.059 (1.50)	0.093 (2.36)	2.705 (68.71)
10-01-1239-XXXX	0.059 (1.50)	0.095 (2.41)	3.193 (81.10)
10-01-1240-XXXX	0.061 (1.55)	0.025 (0.66)	0.180 (4.57)
10-01-1241-XXXX	0.061 (1.55)	0.039 (0.99)	0.151 (3.84)
10-01-1628-XXXX	0.062 (1.57)	0.096 (2.44)	1.562 (39.67)
10-01-1154-XXXX	0.062 (1.57)	0.069 (1.75)	0.893 (22.68)
10-01-1375-XXXX	0.066 (1.68)	0.059 (1.50)	0.565 (14.35)
10-01-6525-XXXX	0.067 (1.70)	0.097 (2.46)	1.094 (27.79)
10-01-1142-XXXX	0.069 (1.75)	0.094 (2.39)	1.072 (27.23)
10-01-1188-XXXX	0.070 (1.78)	0.065 (1.65)	0.809 (20.55)
10-01-1623-XXXX	0.073 (1.85)	0.034 (0.86)	0.230 (5.84)
10-01-1143-XXXX	0.076 (1.93)	0.097 (2.46)	1.460 (37.08)
10-01-1601-XXXX	0.076 (1.93)	0.095 (2.41)	1.397 (35.48)
10-01-1144-XXXX	0.076 (1.93)	0.097 (2.46)	1.581 (40.16)
10-01-2238-XXXX	0.076 (1.93)	0.113 (2.87)	1.262 (32.05)
10-01-6540-XXXX	0.077 (1.96)	0.103 (2.62)	1.511 (38.37)
10-01-6535-XXXX	0.083 (2.11)	0.093 (2.36)	1.357 (34.48)
10-01-1187-XXXX	0.101 (2.57)	0.130 (3.30)	0.592 (15.04)
10-01-1131-XXXX	0.118 (2.98)	0.174 (4.42)	1.385 (35.18)
10-01-6520-XXXX	0.125 (3.18)	0.155 (3.94)	0.885 (22.48)
10-01-1264-XXXX	0.123 (3.12)	0.123 (3.12)	0.853 (21.67)
10-01-1766-XXXX	0.125 (3.18)	0.138 (3.51)	2.859 (72.62)
10-01-1120-XXXX	0.130 (7.69)	0.180 (4.57)	3.412 (86.66)
10-01-6565-XXXX	0.188 (4.78)	0.234 (5.94)	3.837 (37.46)

\* Last four digits should be used to designate material (1215, 1285, etc.). For certain materials and configurations, a minimum order requirement may apply.

Additional sizes are available. For custom sizes, drawings must be provided. Part numbers will be assigned by Chomerics.

continued

(mm dimensions in parentheses)

## Molded D- and O-Rings

Chomerics' D-ring and O-ring gaskets provide moisture/pressure sealing and EMI/EMP shielding when compressed in a properly designed groove. They are interchangeable with standard non-conductive seals of the same dimensions. Rings with I.D.s greater than 2 in. (51 mm) can be made by splicing extruded materials rather than by molding if groove corner radii are generous. Consult Chomerics before ordering.

**Note:** Grooves should be designed to assure 10 to 20% deflection of the gasket, and 100% maximum groove fill when groove dimensions are on the low side of allowable tolerance and gasket dimensions are on the high side.

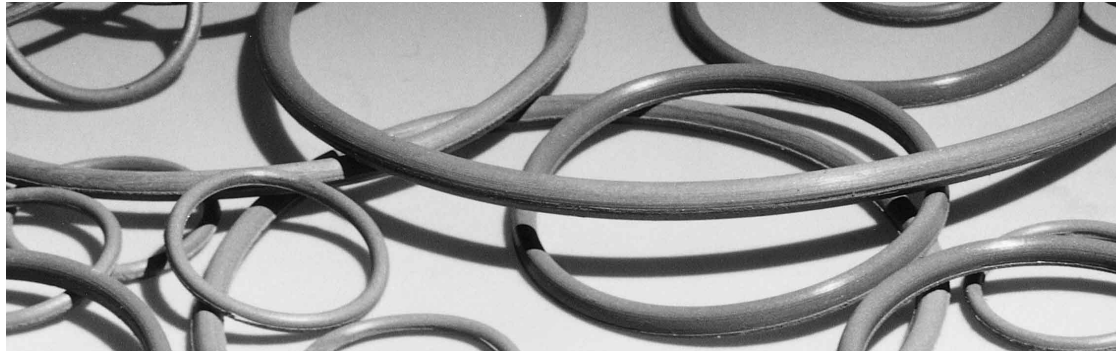
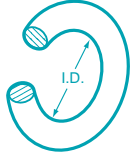
Table 1

DIMENSIONS	TOLERANCES
<i>Cross Sections</i>	
0.040 to 0.069 (1.02-1.75)	±0.003 (±0.08)
0.070 to 0.100 (1.78-2.54)	±0.004 (±0.10)
0.101 to 0.200 (2.57-5.08)	±0.005 (±0.13)
0.201 to 0.350 (5.11-8.89)	±0.008 (±0.20)
<i>Inside Diameters</i>	
0.100 to 1.500 (2.54 to 38.10)	±0.010 (±0.25)
1.501 to 2.500 (38.13 to 63.50)	±0.015 (±0.38)
2.501 to 4.500 (63.53 to 114.30)	±0.020 (±0.51)
4.501 to 7.000 (114.33 to 177.80)	±0.025 (±0.64)
>7.000 (>177.80)	±0.35% of nom. dim.

## Ordering Procedure

Select the part number from Table 2 (D-rings) and Table 3 (O-rings) which follow. The last four digits designate the material. We recommend CHO-SEAL 1215 material for the highest level of shielding effectiveness; CHO-SEAL 1285 material for the best combination of shielding effectiveness, corrosion resistance, weight, cost and temperature range; and CHO-SEAL 1298 for the highest level of corrosion resistance. (For material property specifications, refer to Table 3, pages 32-34.) **Note:** Tooling charges may be incurred for some parts.





**Table 3**

O-RINGS			
Chomerics P/N* MIL P/N: M83528/ 00 [ ]X†-( )	MS 29513 MS 9021 Dash No.	Dimensions	
		Cross Section (Diameter)	I.D.
10-00-2231-XXXX [5] (001)	—	0.030 (0.76)	0.442 (11.23)
10-00-2232-XXXX [5] (002)	—	0.030 (0.76)	0.577 (14.66)
10-00-2259-XXXX [5] (003)	—	0.030 (0.76)	0.692 (17.58)
10-00-2233-XXXX [5] (004)	—	0.030 (0.76)	0.817 (20.75)
10-00-1413-XXXX [5] (005)	—	0.039 (0.99)	0.425 (10.80)
10-00-2777-XXXX [5] (006)	—	0.048 (1.22)	0.295 (7.49)
10-00-1406-XXXX [5] (007)	—	0.050 (1.27)	0.533 (13.54)
10-00-1405-XXXX [5] (008)	—	0.051 (1.30)	0.446 (11.33)
10-00-1407-XXXX [5] (009)	—	0.057 (1.45)	0.415 (10.54)
10-00-1376-XXXX [5] (010)	—	0.063 (1.60)	0.541 (13.74)
10-00-1342-XXXX [5] (011)	—	0.063 (1.60)	0.648 (16.46)
10-00-1631-XXXX [5] (012)	—	0.068 (1.73)	0.847 (21.51)
10-00-1770-XXXX [5] (013)	—	0.068 (1.73)	1.182 (30.02)
10-00-1478-XXXX [5] (014)	—	0.068 (1.73)	3.165 (80.39)
10-00-3811-XXXX [2] (007)	007	0.070 (1.78)	0.145 (3.68)
10-00-2226-XXXX [2] (011)	011	0.070 (1.78)	0.301 (7.65)
10-00-5983-XXXX [2] (012)	012	0.070 (1.78)	0.364 (9.25)
10-00-2227-XXXX [2] (013)	013	0.070 (1.78)	0.426 (10.82)
10-00-1980-XXXX [2] (014)	014	0.070 (1.78)	0.489 (12.42)
10-00-0008-XXXX [5] (015)	—	0.070 (1.78)	0.495 (12.57)
10-00-2065-XXXX [2] (015)	015	0.070 (1.78)	0.551 (14.00)
10-00-0010-XXXX [5] (016)	—	0.070 (1.78)	0.610 (15.49)

**Table 3** *continued*

O-RINGS			
Chomerics P/N* MIL P/N: M83528/ 00 [ ]X†-( )	MS 29513 MS 9021 Dash No.	Dimensions	
		Cross Section (Diameter)	I.D.
10-00-2085-XXXX [5] (017)	—	0.070 (1.78)	0.635 (16.13)
10-00-1689-XXXX [5] (018)	—	0.070 (1.78)	0.667 (16.94)
10-00-2066-XXXX [2] (017)	017	0.070 (1.78)	0.676 (17.17)
10-00-1690-XXXX (NA)	—	0.070 (1.78)	0.738 (18.75)
10-00-0012-XXXX (NA)	—	0.070 (1.78)	0.735 (18.67)
10-00-2075-XXXX [2] (018)	108	0.070 (1.78)	0.739 (18.77)
10-00-1981-XXXX [2] (019)	019	0.070 (1.78)	0.801 (20.35)
10-00-0014-XXXX [5] (019)	—	0.070 (1.78)	0.860 (21.85)
10-00-2076-XXXX [2] (020)	020	0.070 (1.78)	0.864 (21.95)
10-00-1843-XXXX [2] (021)	021	0.070 (1.78)	0.926 (23.52)
10-00-2068-XXXX [2] (022)	022	0.070 (1.78)	0.989 (25.12)
10-00-2536-XXXX (NA)	—	0.070 (1.78)	1.046 (26.57)
10-00-2029-XXXX (NA)	—	0.070 (1.78)	1.110 (28.19)
10-00-2069-XXXX [2] (024)	024	0.070 (1.78)	1.114 (28.30)
10-00-1844-XXXX (NA)	—	0.070 (1.78)	1.176 (29.87)
10-00-2084-XXXX [5] (020)	—	0.070 (1.78)	1.230 (31.24)
10-00-2070-XXXX [2] (026)	026	0.070 (1.78)	1.239 (31.47)
10-00-2535-XXXX (NA)	—	0.070 (1.78)	1.296 (32.92)
10-00-2228-XXXX (NA)	—	0.070 (1.78)	1.362 (34.59)
10-00-2071-XXXX [2] (028)	028	0.070 (1.78)	1.364 (34.65)

\* Last four digits should be used to designate material (1215, 1285, etc.). For certain materials and configurations, a minimum order requirement may apply.

† "X" should be replaced by applicable MIL-G-83528B material type (e.g., A, B, C, etc.). Number in bracket is MIL-G-83528B slash sheet. Number in parentheses is MIL-G-83528B dash number. Insert them (without brackets or parentheses) to complete MIL P/N.

(mm dimensions in parentheses)



Table 3 continued

O-RINGS			
Chomerics P/N* MIL P/N: M83528/ 00[ ]X <sup>†</sup> -( )	MS 29513 MS 9021 Dash No.	Dimensions	
		Cross Section (Diameter)	I.D.
10-00-0024-XXXX (NA)	—	0.070 (1.78)	1.485 (37.72)
10-00-2677-XXXX (NA)	—	0.070 (1.78)	1.609 (40.87)
10-00-4123-XXXX (NA)	030	0.070 (1.78)	1.614 (41.00)
10-00-2229-XXXX (NA)	—	0.070 (1.78)	1.674 (42.52)
10-00-0028-XXXX (NA)	—	0.070 (1.78)	1.735 (44.07)
10-00-4124-XXXX (NA)	032	0.070 (1.78)	1.864 (47.35)
10-00-0032-XXXX (NA)	—	0.070 (1.78)	1.980 (50.29)
10-00-2230-XXXX (NA)	—	0.070 (1.78)	3.009 (76.43)
10-00-0052-XXXX (NA)	—	0.070 (1.78)	3.170 (80.52)
10-00-2040-XXXX (NA)	043	0.070 (1.78)	3.489 (88.62)
10-00-2320-XXXX (NA)	—	0.076 (1.93)	0.656 (16.66)
10-00-2321-XXXX (NA)	—	0.076 (1.93)	0.779 (19.79)
10-00-1827-XXXX (NA)	—	0.084 (2.13)	0.852 (21.64)
10-00-0044-XXXX (NA)	—	0.084 (2.13)	2.678 (68.02)
10-00-0020-XXXX (NA)	—	0.087 (2.21)	1.250 (31.75)
10-00-0038-XXXX (NA)	—	0.087 (2.21)	2.360 (59.94)
10-00-3550-XXXX (NA)	—	0.094 (2.39)	0.750 (19.05)
10-00-1459-XXXX (NA)	—	0.095 (2.41)	0.897 (22.78)
10-00-1378-XXXX (NA)	—	0.095 (2.41)	1.074 (27.28)
10-00-4452-XXXX (NA)	—	0.100 (2.54)	1.005 (25.53)

Table 4

DIMENSIONS	TOLERANCES
<i>Cross Sections</i>	
0.040 to 0.069 (1.02-1.75)	±0.003 (±0.08)
0.070 to 0.100 (1.78-2.54)	±0.004 (±0.10)
0.101 to 0.200 (2.57-5.08)	±0.005 (±0.13)
0.201 to 0.350 (5.11-8.89)	±0.008 (±0.20)
<i>Inside Diameters</i>	
0.100 to 1.500 (2.54 to 38.10)	±0.010 (±0.25)
1.501 to 2.500 (38.13 to 63.50)	±0.015 (±0.38)
2.501 to 4.500 (63.53 to 114.30)	±0.020 (±0.51)
4.501 to 7.000 (114.33 to 177.80)	±0.025 (±0.64)
>7.000 (>177.80)	±0.35% of nom. dim.

Table 3 continued

O-RINGS			
Chomerics P/N* MIL P/N: M83528/ 00[ ]X <sup>†</sup> -( )	MS 29513 MS 9021 Dash No.	Dimensions	
		Cross Section (Diameter)	I.D.
10-00-1754-XXXX (NA)	—	0.101 (2.57)	2.805 (71.25)
10-00-1359-XXXX (NA)	—	0.101 (2.57)	3.153 (80.87)
10-00-1360-XXXX (NA)	—	0.101 (2.57)	3.613 (80.87)
10-00-1921-XXXX [2] (114)	—	0.103 (2.62)	0.612 (15.54)
10-00-1847-XXXX [2] (117)	—	0.103 (2.62)	0.799 (20.29)
10-00-4685-XXXX [5] (021)	—	0.103 (2.62)	1.040 (26.42)
10-00-2086-XXXX (NA)	—	0.103 (2.62)	1.240 (31.50)
10-00-1845-XXXX [2] (126)	—	0.103 (2.62)	1.362 (34.59)
10-00-2072-XXXX [2] (128)	128	0.103 (2.62)	1.487 (37.77)
10-00-1846-XXXX [5] (022)	130	0.103 (2.62)	1.612 (40.94)
10-00-2031-XXXX [2] (132)	132	0.103 (2.62)	1.737 (44.12)
10-00-2087-XXXX [5] (023)	—	0.103 (2.62)	1.790 (45.47)
10-00-2030-XXXX [2] (142)	142	0.103 (2.62)	2.362 (59.99)
10-00-1691-XXXX [2] (155)	—	0.103 (2.62)	3.987 (101.27)
10-00-1573-XXXX (NA)	—	0.115 (2.92)	2.876 (73.05)
10-00-1607-XXXX (NA)	—	0.147 (3.73)	2.265 (57.53)
10-00-1608-XXXX (NA)	—	0.147 (3.73)	3.690 (93.73)
10-00-1782-XXXX (NA)	—	0.188 (4.78)	0.673 (17.09)
10-00-1746-XXXX (NA)	—	0.210 (5.33)	3.475 (12.07)
10-00-1354-XXXX (NA)	—	0.243 (6.17)	3.409 (86.59)
10-00-1747-XXXX (NA)	—	0.394 (10.01)	3.464 (87.99)

\* Last four digits should be used to designate material (1215, 1285, etc.). For certain materials and configurations, a minimum order requirement may apply.

† "X" should be replaced by applicable MIL-G-83528B material type (e.g., A, B, C, etc.). Number in bracket is MIL-G-83528B slash sheet. Number in parentheses is MIL-G-83528B dash number. Insert them (without brackets or parentheses) to complete MIL P/N.

(mm dimensions in parentheses)