

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
Cut Length	
<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.
Cross Section	
< 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)	

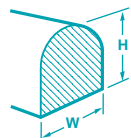
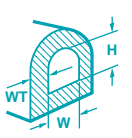
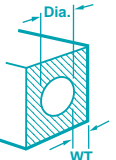
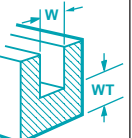
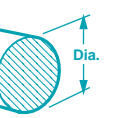
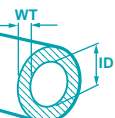
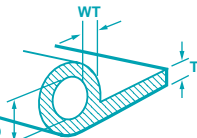

In general, pressure-sensitive adhesive requires a minimum of 0.125 inch (3.17 mm) mating surface. For this reason, Chomerics does not ordinarily supply pressure-sensitive adhesive on solid or hollow O-strips.

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

EXTRUSION MANUFACTURING GUIDELINES & LIMITATIONS, inches (mm) <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°)
CHO-SEAL 1485 (Silver-Plated-Aluminum-Filled Silicone)	Steel	7.0 (1.23)
	Aluminum	7.0 (1.23)
CHO-SEAL S6304 (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.