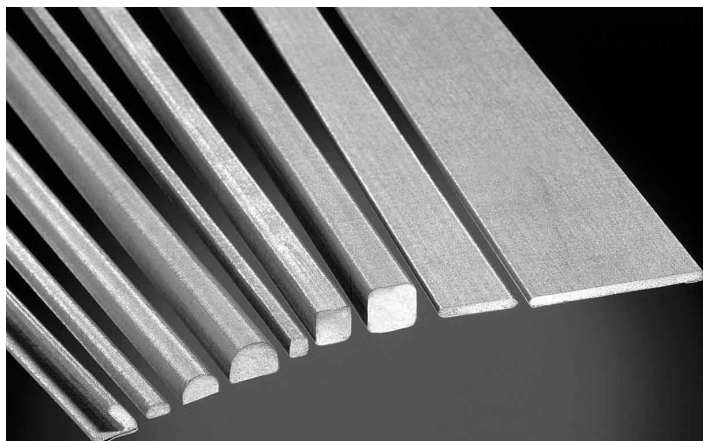


# SOFT-SHIELD® 5000 Series



## SOFT-SHIELD 5000 Series Conductive Jacket over Foam EMI Gaskets

- Choice of General Duty or UL 94V-0 rated versions
- Typically require <1 lb/in (0.175 N/mm) closure force – 5 times lower than other gaskets
- >90 dB attenuation from 20 MHz to 10 GHz
- Asymmetrical profiles, as well as C, V, P, D shapes
- No performance degradation after 10,000 compression cycles
- Wide release liner for easy removal
- Kiss-cut parts on release sheets for easy “peel-and-stick” grounding applications
- Self-terminating jacket – no sharp edges
- Tested to Bellcore GR-64-Core Airborne Contaminants requirements
- Custom lengths, custom profiles

## Unlimited Profiles with Ultra-Low Closure Force

SOFT-SHIELD 5000 Series EMI gaskets are designed to meet the stringent shielding and mechanical performance requirements of today’s commercial electronic enclosures, medical electronics, factory automation equipment, reprographics and grounding applications. A growing number of standard profiles and sizes provide flexibility when selecting a gasket for a specific application. Custom profiles or sizes can also be produced.

Each SOFT-SHIELD 5000 Series gasket consists of an electrically conductive fabric jacket over a highly compressible urethane foam core. The nickel-plated, woven nylon rip-stop jacket is self-terminating when cut. Chosen for its excellent compressibility, the foam core typically requires less than 1 lb/in (0.175 N/mm) closure force, making it especially useful for thin-walled plastic enclosures. Standard pressure-sensitive adhesive attachment tape (PSA) makes SOFT-SHIELD 5000 Series gaskets a user-friendly and cost-effective design solution.

Every profile in the SOFT-SHIELD 5000 Series can be provided in a General Duty version or a UL 94V-0 rated version, as needed, with no difference in performance.

## Configurations

Gaskets are supplied in standard 8-foot lengths or cut-to-length strips. Depending on the profile, gasketing can also be supplied on spools. For rapid peel-and-stick grounding applications, the material is supplied as kiss-cut parts on polyester film release backers, or as individual pieces.

Chomerics also fabricates single-piece, spliced picture frame gaskets from continuous lengths. With their fully jacketed surfaces, these gaskets are ideally suited for low closure force applications that require 360° EMI shielding, or the ease of installing a one-piece gasket (see next page).

*continued*

**Table 1**

TYPICAL PROPERTIES		
Property	Test Method	SOFT-SHIELD 5000
Shielding Effectiveness	CHO-TM-TP08	See Figure 1
Compression-Deflection	ASTM C165 (modified)	Request Technical Bulletin 172
Compression Set	ASTM D3574 (modified)	<25%
Electrical Conductivity	CEPS-0002	0.1 ohm/sq., max.
Adhesive Peel Strength	ASTM D1000 (90° Bend)	4 lb/inch (0.7 N/mm), min.
Pressure-Sensitive Adhesive	—	Non-Conductive Adhesive
Operating Temperature Range	—	-40 to +70°C

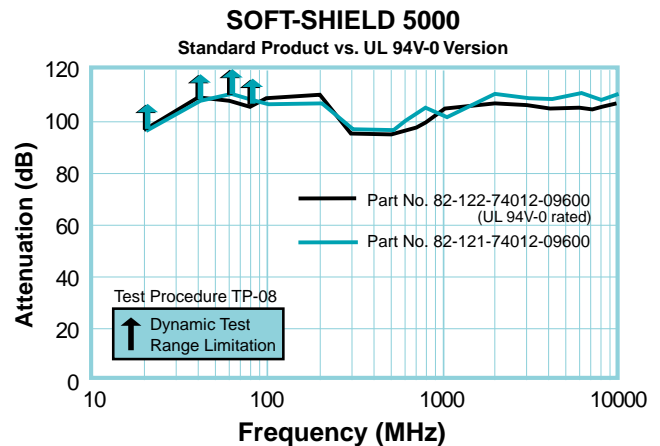
### Foil jacket wrapped version

Our newest material...the SOFT-SHIELD 5500 Series... consists of an aluminum foil jacket over a urethane foam core, offered in continuous lengths in the same profiles as 5000 Series gaskets. Request information.

Table 2

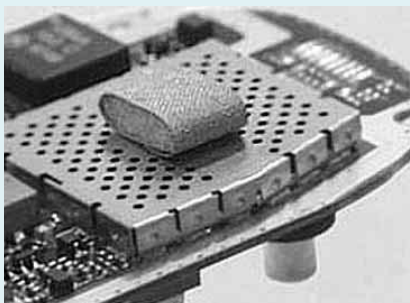
DIMENSIONAL TOLERANCES	
<b>Cross Section inch (mm)</b>	<b>inch (mm)</b>
Up to 0.040 (1.02)	±0.010 (0.25)
Above 0.040 (1.02)	±0.020 (0.051)
<b>Cut Length inch (cm)</b>	<b>inch (mm)</b>
0.10 to 6.0 (0.25 to 15.2)	±0.030 (0.76)
6.1 to 18.0 (15.5 to 45.7)	±0.060 (1.52)
18.1 to 42.0 (46.0 to 106.7)	±0.075 (1.91)
42.1 to 96.0 (107.0 to 243.8)	±0.090 (2.29)
<b>Kiss-Cut</b>	<b>inch (mm)</b>
0.04 to 0.12 (1.02 to 3.05)	±0.015 (0.38)
0.121 to 0.40 (3.07 to 10.16)	±0.035 (0.89)

Figure 1 Shielding Effectiveness



## Typical Application-Ready Solutions

### Mobile phone grounding



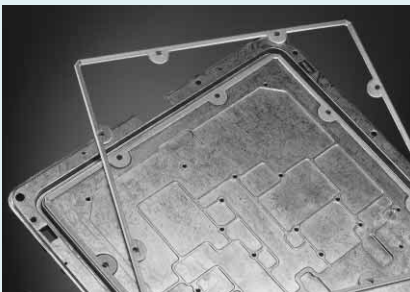
#### Conditions and Requirements

- minimize through-resistance for optimum grounding
- maximum 0.25 x 0.25 inch footprint
- accommodate 0.040 inch variation in gap
- snap-in plastic cover with 2 lb max. load at 50% gasket deflection
- high volume application

#### SOFT-SHIELD Gasket Solution

- highly conductive jacket offers low resistance
- standard profile, no customization required
- meets low closure force requirements
- kiss-cut parts on release paper allow quick peel-and-stick installation

### Interface between aluminum casting and plastic antenna housing



#### Conditions and Requirements

- overcome 45 dB leakage problem
- replace multiple strips with single-piece design for ease of installation
- 0.030 inch flatness tolerance on component mating surfaces
- low cost a priority

#### SOFT-SHIELD Gasket Solution

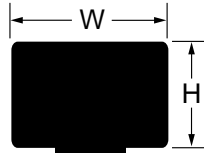
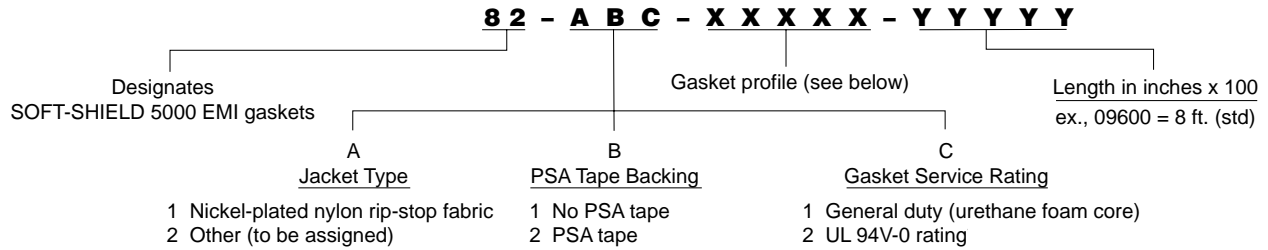
- effectively shields the interface
- one-piece picture frame gasket with integral notches for fasteners
- meets low closure force requirements
- customized solution that meets cost criteria—lower installed cost

#### Foil jacket wrapped version

Our newest material...the SOFT-SHIELD 5500 Series... consists of an aluminum foil jacket over a urethane foam core, offered in continuous lengths in the same profiles as 5000 Series gaskets. Request information.

**ORDERING INFORMATION**

Referring to Tables 3-6, use the part number shown here to order SOFT-SHIELD 5000 Series gasketing.



**Table 3**

RECTANGULAR STRIPS		
Profile Number	Height	Width
74039	0.020 (0.50)	0.157 (4.00)
74020	0.039 (1.00)	0.157 (4.00)
74003	0.039 (1.00)	0.197 (5.00)
74038	0.039 (1.00)	0.275 (7.00)
74004	0.039 (1.00)	0.394 (10.00)
74035	0.059 (1.50)	0.157 (4.00)
74040	0.062 (1.60)	0.200 (5.00)
74034	0.071 (1.80)	0.551 (14.00)
74002	0.079 (2.00)	0.157 (4.00)
74005	0.079 (2.00)	0.275 (7.00)
74025	0.079 (2.00)	0.394 (10.00)
74049	0.079 (2.00)	0.827 (21.00)
74018	0.118 (3.00)	0.118 (3.00)
74048	0.118 (3.00)	0.157 (4.00)
74023	0.125 (3.18)	0.250 (6.35)
74000	0.125 (3.18)	0.375 (9.53)
74012	0.125 (3.18)	0.500 (12.70)
74001	0.125 (3.18)	0.800 (20.32)
74026	0.125 (3.18)	1.850 (47.00)
74015	0.130 (3.30)	0.190 (4.83)
74017	0.200 (5.08)	0.200 (5.08)
74054	0.200 (5.08)	0.300 (7.60)
74022	0.236 (6.00)	0.236 (6.00)
74016	0.250 (6.35)	0.375 (9.53)
74014	0.250 (6.35)	0.500 (12.70)
74024	0.375 (9.53)	0.375 (9.53)
74021	0.375 (9.53)	0.500 (12.70)
74028	0.500 (12.70)	0.500 (12.70)

**APPROX. ACTUAL SIZE**



NOTE: Dimensions shown do not include PSA thickness (0.005 inch typically). Actual size shown with PSA strip.

All SOFT-SHIELD 5000 Series profiles can be supplied in either General Duty or UL 94V-0 rated versions.

Compression-deflection information is available for SOFT-SHIELD 5000 Series profiles. Request Technical Bulletin 172.

**Foil jacket wrapped version**

Our newest material...the SOFT-SHIELD 5500 Series... consists of an aluminum foil jacket over a urethane foam core, offered in continuous lengths in the same profiles as 5000 Series gaskets. Request information.

*continued*

(mm dimensions in parentheses)

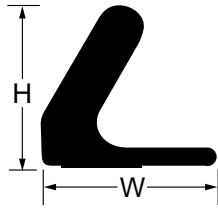


Table 4

C-FOLD STRIPS		
Profile Number	Height	Width
74057	0.250 (6.35)	0.280 (7.11)
74008	0.385 (9.78)	0.420 (10.67)
74050	0.394 (10.00)	0.630 (16.00)
74027	0.420 (10.67)	0.465 (11.80)
74051	0.591 (15.00)	0.551 (14.00)
74010	0.675 (17.5)	0.580 (14.73)

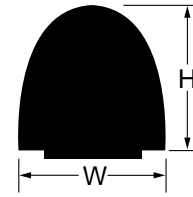
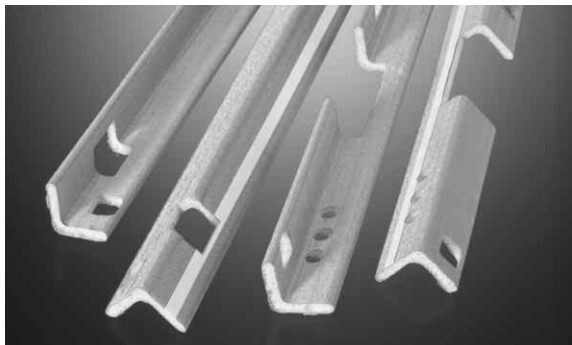
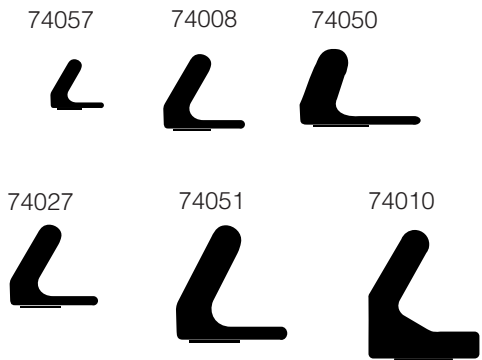


Table 5

D-STRIPS		
Profile Number	Height	Width
74037	0.060 (1.52)	0.150 (3.80)
74019	0.090 (2.30)	0.090 (2.30)
74031	0.090 (2.30)	0.150 (3.80)
74053	0.100 (2.54)	0.250 (6.35)
74052	0.108 (2.74)	0.150 (3.80)
74055	0.110 (2.79)	0.225 (5.72)
74013	0.120 (3.05)	0.150 (3.80)
74036	0.120 (3.05)	0.250 (6.35)
74032	0.125 (3.18)	0.090 (2.30)
74006	0.140 (3.56)	0.250 (6.35)
74058	0.140 (3.56)	0.380 (9.65)
74056	0.155 (3.94)	0.250 (6.35)
74041	0.157 (4.00)	0.150 (3.80)
74030	0.157 (4.00)	0.236 (6.00)
74033	0.180 (4.57)	0.400 (10.16)
74011	0.250 (6.35)	0.375 (9.53)
74029	0.375 (9.53)	0.500 (12.70)

APPROX. ACTUAL SIZE



APPROX. ACTUAL SIZE



Compression-deflection information is available for SOFT-SHIELD 5000 Series profiles. Request Technical Bulletin 172.

Chomerics' Applications Engineering Department welcomes the opportunity to provide assistance with design and prototype fabrication of SOFT-SHIELD 5000 Series EMI Gaskets in custom profiles.

NOTE: Dimensions shown do not include PSA thickness (0.005 inch typically). Actual size shown with PSA strip.  
All SOFT-SHIELD 5000 Series profiles can be supplied in either General Duty or UL 94V-0 rated versions.

**Foil jacket wrapped version**

Our newest material...the SOFT-SHIELD 5500 Series... consists of an aluminum foil jacket over a urethane foam core, offered in continuous lengths in the same profiles as 5000 Series gaskets. Request information.

(mm dimensions in parentheses)

Table 6

OTHER SOFT-SHIELD 5000 GASKET PROFILES			
Profile	Profile Number	Height inches (mm)	Width inches (mm)
	74007	0.106 (2.69)	0.445 (11.30)
	74009	0.130 (3.30)	0.520 (13.20)
	74042	0.782 (19.86)	0.882 (22.40)
	74045	0.242 (6.15)	0.296 (7.52)
	74046 74047	0.200 (5.08) 0.300 (7.62)	0.190 (4.83) 0.270 (6.86)
	74059	0.080 (2.03)	0.675 (17.15)
	74062 74060	0.152 (3.86) 0.152 (3.86)	0.250 (6.35) 0.256 (6.50)

NOTE: Dimensions shown do not include PSA thickness (0.005 inch typically). Actual size shown with PSA strip.

All SOFT-SHIELD 5000 Series profiles can be supplied in either General Duty or UL 94V-0 rated versions.

**Foil jacket wrapped version**

Our newest material...the SOFT-SHIELD 5500 Series... consists of an aluminum foil jacket over a urethane foam core, offered in continuous lengths in the same profiles as 5000 Series gaskets. Request information.

(mm dimensions in parentheses)