

# SOFT-SHIELD® 3700

## Low Closure Force, High Temperature, Conductive Fabric Over Foam EMI Shielding Gaskets

SOFT-SHIELD® 3700 allows the use of fabric over foam EMI/Grounding gasketing technology to be used in elevated temperature applications where continuous operating temperatures of 125° C or less are required.

These cost effective, high performance gaskets with a UL 94-V0 flammability rating, provide EMI shielding solutions for the automotive, military and information technology market applications in higher temperature areas previously not possible with urethane foam based products. SS3700 can be rapid prototyped in many configurations and allows flexibility integrating it into new or current designs. The part will not require expensive tooling, virtually eliminating supply start up costs. The material is highly reliable ensuring years of positive performance. The nickel plated copper polyester rip stop fabric is resistant to oxidation thus delivering years of shielding and electrical grounding.

Further, the characteristic low compression set of these foam based gaskets provides more reliable long term shielding, especially in applications where gasketed enclosure flanges are frequently opened and closed. Unlike alternative solutions such as metallic fingers, the material will not break or crack during handling thus improving production floor yields and avoiding the potential for a broken fragment falling onto a PCB. The material delivers shielding/grounding at a low deflection force over a large deflection range allowing for a relaxation of mechanical tolerances. SS3700 can accommodate up to 50% of it's cross sectional height enabling it to accommodate a wide range of tolerance stack up and still shield. This reduces dimensional constraints and cost on all other components.

Since they are offered with a conductive Pressure Sensitive Adhesive (PSA), installation of SOFT-SHIELD 3700 gaskets is made simple and can be delivered in several ways to the factory floor.

### Product Features

- Operation range from -40° C to 125° C
- Low-closure force, requires less than 1 lb./inch (0.175 N/mm)
- Low compression set, <10%
- UL 94 V-0 flammability rating
- Excellent shielding effectiveness, >100 dB, 100 MHz – 3 GHz
- Abrasion and shear resistant conductive fabric jacket
- ROHS and REACH compliant
- Low cost compared to industry alternative, i.e., fingerstock
- Available in square and rectangular cross-sections, and can be cut-to-length or die cut to readily fit a design
- Available in standard 96" (240 mm) lengths

### Typical Applications

- Between screws and chassis
- Panel, Cover, Vent & Door seals
- Grounding tabs
- Improved ground paths



# SOFT-SHIELD® 3700 AVAILABLE PROFILES

## Available Profiles

Contact Chomerics for any other special requirements and custom profiles.

For non-rectangular profiles see [SOFT-SHIELD 3800](#).

Rectangle Profiles inches (mm)

Profile	Shape	Height ±0.020 (0.51)	Width ±0.020 (0.51)
1008	Rect.	0.075 (1.91)	0.118 (2.99)
1003	Rect.	0.075 (1.91)	0.157 (3.99)
1011	Rect.	0.075 (1.91)	0.197 (5.00)
1004	Rect.	0.075 (1.91)	0.236 (5.99)
1012	Rect.	0.075 (1.91)	0.276 (7.01)
1005	Rect.	0.075 (1.91)	0.315 (8.00)
1013	Rect.	0.075 (1.91)	0.394 (10.00)
1014	Rect.	0.075 (1.91)	0.472 (11.99)
1009	Rect.	0.075 (1.91)	0.500 (12.70)
1015	Rect.	0.075 (1.91)	0.591 (15.01)
1016	Rect.	0.075 (1.91)	0.827 (21.00)
1017	Rect.	0.075 (1.91)	0.984 (24.99)
1007	Rect.	0.075 (1.91)	1.614 (40.99)
1010	Rect.	0.075 (1.91)	1.890 (48.00)
1024	Rect.	0.105 (2.67)	0.157 (3.99)
1018	Rect.	0.105 (2.67)	0.197 (5.00)
1023	Rect.	0.105 (2.67)	0.236 (5.99)
1000	Rect.	0.105 (2.67)	0.250 (6.35)
1021	Rect.	0.105 (2.67)	0.264 (6.71)
1025	Rect.	0.105 (2.67)	0.375 (9.53)
1022	Rect.	0.105 (2.67)	0.394 (10.00)
1001	Rect.	0.105 (2.67)	0.500 (12.70)



Rectangle Profiles inches (mm) (continued)

Profile	Shape	Height ±0.020 (0.51)	Width ±0.020 (0.51)
1020	Rect.	0.105 (2.67)	0.512 (13.00)
1019	Rect.	0.105 (2.67)	0.826 (20.98)
1027	Rect.	0.137 (3.48)	0.197 (5.00)
1026	Rect.	0.137 (3.48)	0.354 (8.99)
1028	Rect.	0.137 (3.48)	0.512 (13.00)
1029	Rect.	0.137 (3.48)	0.826 (20.99)
1030	Rect.	0.200 (5.08)	0.137 (3.48)
1053	Rect.	0.200 (5.08)	0.250 (6.35)
1031	Rect.	0.200 (5.08)	0.295 (7.49)
1035	Rect.	0.200 (5.08)	0.315 (8.00)
1034	Rect.	0.200 (5.08)	0.394 (10.00)
1036	Rect.	0.200 (5.08)	0.591 (15.01)
1032	Rect.	0.200 (5.08)	1.949 (49.50)
1037	Rect.	0.262 (6.65)	0.512 (13.00)
1038	Rect.	0.262 (6.65)	1.000 (25.40)
1041	Rect.	0.387 (9.83)	0.394 (10.00)
1039	Rect.	0.387 (9.83)	0.591 (15.01)
1040	Rect.	0.387 (9.83)	0.787 (19.99)
1043	Rect.	0.387 (9.83)	0.787 (19.99)
1042	Rect.	0.394 (10.00)	0.262 (6.65)
1045	Rect.	0.512 (13.00)	0.387 (9.83)
1044	Rect.	0.512 (13.00)	0.512 (13.00)

# SOFT-SHIELD® 3700 PRODUCT INFORMATION

Typical Properties	Value	Test Method
Shielding Effectiveness 20MHz to 10 GHz	> 100 (dB)	CHO-TM-TP08
35% Compression Deflection lb/in (N/mm), [0.125 x 0.375 in. cross-section]	< 1 (<0.175)	ASTM C165
Compression Set	<10%	ASTM D3574
Operating Temperature °F (°C)	-40 to 257 (-40 to 125)	--
Acrylic Adhesive Peel Strength, inch (N/mm) [Min. value]	2 (0.35)	ASTM D1000
Recommended % Deflection Range	20 - 50%	--
Flammability (See UL File Number E140244)	V-0	UL 94
Shelf Life, months from date of sale	12	--
Storage Conditions, °F (°C) @ 50% Relative Humidity	70 ± 20 (21± 10)	--

## Dimensional Tolerances

Minimum Wall Width inches (mm) 0.060 (1.52)

### Cut Length inches (cm)

up to 5.00 (up to 12.7)  
 5.01 to 10.00 (12.7 to 25.4)  
 10.01 to 15.00 (25.4 to 38.1)  
 15.01 to 20.00 (38.1 to 50.8)  
 20.01 to 30.00 (50.8 to 76.2)  
 30.01 to 48.00 (76.2 to 121.92)  
 48.01 to 95.00 (121.92 to 241.3)  
 over 95.00 (over 241.3)

### inches (mm)

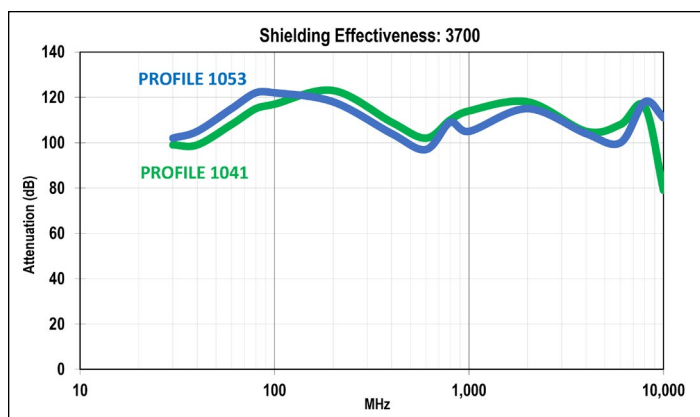
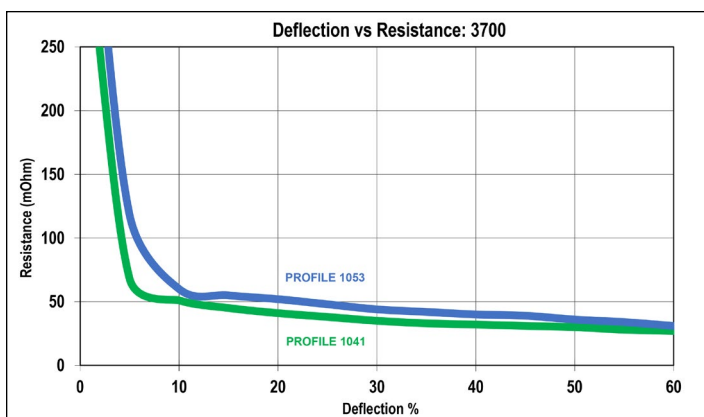
±0.030 (0.76)  
 ±0.060 (1.52)  
 ±0.070 (1.78)  
 ±0.080 (2.03)  
 ±0.100 (2.54)  
 ±0.200 (5.08)  
 ±0.250 (6.35)  
 ±0.500 (12.7)

### Die-Cut inches (mm)

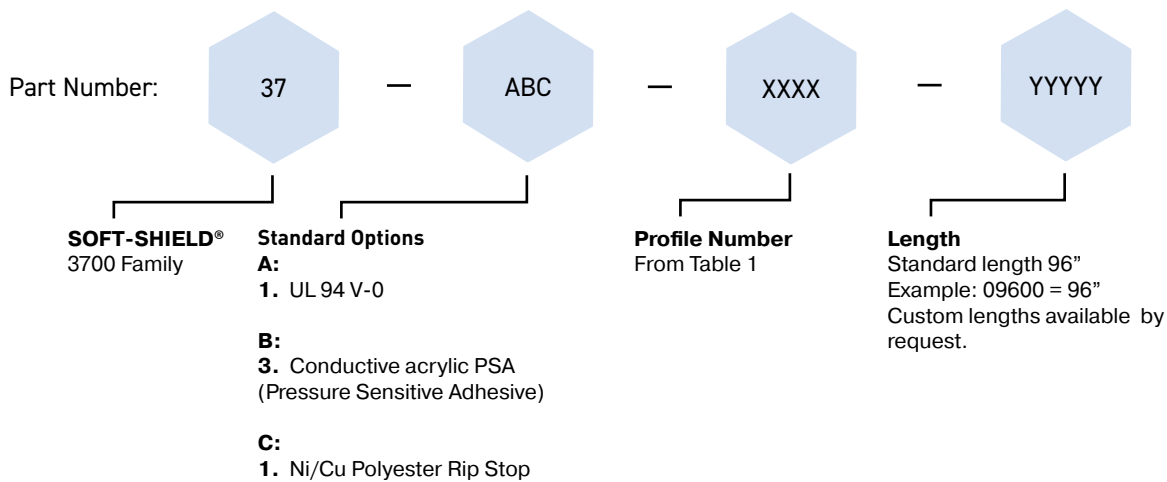
up to 10.00 (up to 254)  
 10.01 to 20.00 (254.3 to 508)  
 20.01 to 30.00 (508.3 to 762)  
 over 30.00 (over 762)

### inches (mm)

±0.020 (0.51)  
 ±0.030 (0.76)  
 ±0.040 (1.02)  
 ±0.060 (1.52)



# SOFT-SHIELD® 3700 ORDERING INFORMATION



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