

# SOFT-SHIELD® 4850

## Electrically Conductive Foam EMI Shielding Gaskets



Parker Chomerics SOFT-SHIELD® 4850 is a true multi-planar, Z-axis electrically conductive foam for indoor applications. It is based on the unique integration of electrically conductive silver-plated nylon fibers into a low-density urethane foam, providing for a performance-driven, cost-effective EMI shielding solution.

Through the optimization of conductive fiber construction, loading and dispersion within the foam matrix, SOFT-SHIELD 4850 provides excellent Z-axis electrical conductivity with extremely short ground paths.

SOFT-SHIELD 4850 has a UL 94 V-0 flammability rating and is available in configurations such as bulk rolls, cut sheets or custom die cut shapes. A uniform silver-plated copper particle filled, electrically conductive acrylic pressure sensitive adhesive (PSA) is available on one side for ease of assembly.



## Contact Information

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## Product Features

- 95 dB typical shielding effectiveness from 20 MHz to 10 GHz
- Z-axis electrical conductivity
- Excellent through resistance (<60 milliohms at 30% gasket deflection with pressure-sensitive adhesive)
- Low closure force
- Stable electrical performance (through resistance) after multiple closure cycles
- Low compression set <15%
- Available in bulk rolls, cut sheets or custom die cut shapes
- Non-nickel bearing material

## Typical Applications

- Telecom Infrastructure rack and enclosure components
- Servers and desktop PCs
- I/O panels, backplanes, connectors, access panels and rectangular/square strip gasket seals
- LCD/PDP large screen TVs
- Indoor electronics applications requiring UL94 V-0 flammability rating

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# SOFT-SHIELD® 4850 Product Information

Typical Properties	SOFT-SHIELD® 4850	Test Method
Shielding Effectiveness – 20 MHz to 10 GHz, dB	95	CHO-TM-TP08
Compression-Deflection – 3 mm thick sample, psi (kPa)	25% - 2.5 (17.2) 50% - 4.3 (29.6)	ASTM C165 (Modified)
Through-Resistance	(See Figure 1)	ASTM D991
Gasket Compression Set, %	<15	ASTM D3574
Tensile Strength – 3 mm thick sample, psi (MPa)	306 (2.1)	ASTM D412 (Modified)
Electrically Conductive Acrylic PSA Peel Strength, oz/in	15	ASTM D1000 (Modified to 90° peel)
Recommended % Deflection Range, %	15 - 50	--
Flammability (See UL File Number E140244)	V-0	UL 94
NASA Outgassing, % TML (% CVCN)	7.20 (4.35)	ASTM E595
Operating Temperature °F (°C)	-40 to <b>158</b> (-40 to <b>70</b> )	--
Recommended Storage Conditions @ 50% Relative Humidity °F (°C)	21 ± 10 (70 ± 20)	--
Shelf Life with PSA, months from date of shipment	24*	--
Shelf Life (no adhesive)	Indefinite	--

\* Possible extension of additional twelve (12) months. [See Parker Chomerics Shelf Life Re-certification for Laminated Solutions document for procedure.](#)

## Dimensional Tolerances

### Minimum Wall Width for Steel-Rule Die cut parts, inches (mm), 0.100 (2.54)

Overall Die-Cut inches (mm)

Up to 10.00 (up to 254) ±0.020 (0.51)

10.01 to 20.00 (254.3 to 508) ±0.030 (0.76)

20.01 to 30.00 (508.3 to 762) ±0.040 (1.02)

Over 30.00 (over 762) ±0.060 (1.52)

All thicknesses are toleranced at ± 0.5mm (± .020")

Figure 1

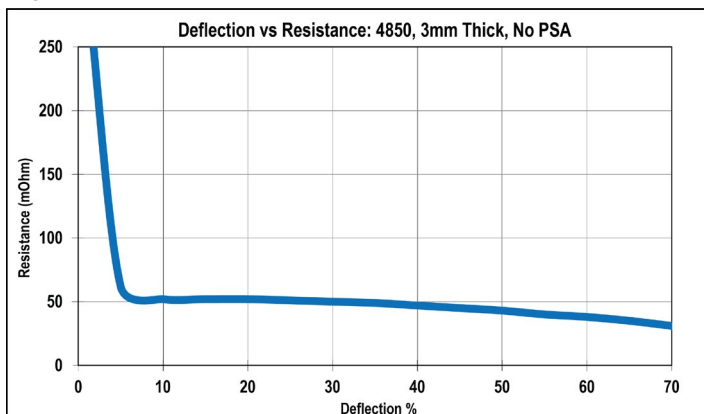
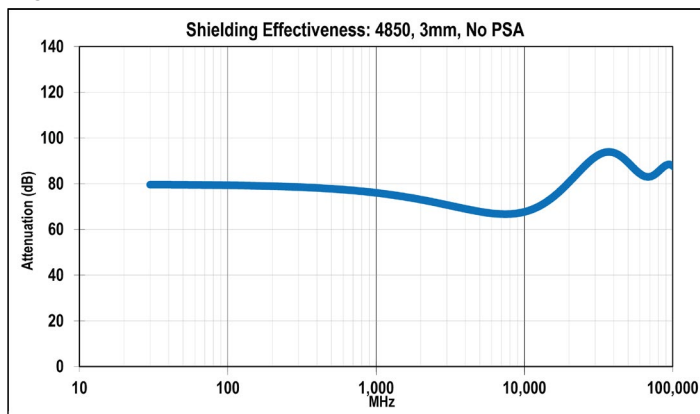


Figure 2



# SOFT-SHIELD® 4850 Ordering Information

Table 2 - Part Numbering – 50 ft long bulk rolls and sheets

4850	—	1X	—	YYYY	—	ZZZZ
SOFT-SHIELD® 4850 Family		Adhesive Option		Roll/Sheet Size		Thickness mm (in)
		0 = No PSA 2 = Conductive PSA		0610 = 610 mm x 15,240 mm (24" x 50') long roll 1212 = 12" (305 mm) sq. sheet 2424 = 24" (610 mm) sq. sheet		0100 = 1.0 (.039)    0300 = 3.0 (.118) 0150 = 1.5 (.060)    0400 = 4.0 (.157) 0200 = 2.0 (.078)    0500 = 5.0 (.197) All thicknesses are toleranced at ± 0.5mm (± .020")

For custom die-cut parts, contact Parker Chomerics Inside Sales.

Table 3 - Custom Part Numbering

4850	—	L	XXXX
SOFT-SHIELD® 4850 Family		LXXXX	
		Custom die-cut shape with or without PSA assigned by Parker Chomerics	

Supplied by:  
[www.hitek-ltd.co.uk](http://www.hitek-ltd.co.uk)  
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