SOFT-SHIELD® 4850

Multi-Planar Electrically Conductive Foam EMI Shielding Gaskets

Customer Value Proposition

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 fibers into a low-density urethane foam, providing for a performance-driven, cost-effective EMI shielding solution. It offers greater EMI shielding performance from other SOFT-SHIELD products which may only consist of an electrically conductive jacket over traditional urethane foam.

Through the optimization of conductive fiber construction, loading and dispersion within the foam matrix, SOFT-SHIELD 4850 provides superb Z-axis conductivity with extremely short ground paths. Since the integrity of the base foam is uncompromised, SOFT-SHIELD 4850 offers exceptional physical and mechanical properties.

SOFT-SHIELD 4850 is flammability rated to UL 94 V-0 and is available in cut sheets, bulk rolls or custom die cut shapes. A uniform (silver plated, copper particle) electrically conductive acrylic pressure sensitive adhesive (PSA) is available on one side to help secure after installation.

Product Features

- 95 dB shielding effectiveness from 20 MHz to 10 GHz
- Low compression set of less than 15%
- Stable electrical performance (through resistance) after multiple closure cycles
- Excellent through resistance (< 30 milliohm @ 25% gasket deflection)
- Non-nickel bearing material (silver plated fibers)
- Available in cut sheets, bulk rolls or custom die cut shapes
- Z-axis conductivity allows compartmental shielding
- At low deflection (15%) demonstrates optimal electrical performance
- Offered with or without electrically conductive acrylic pressure sensitive adhesive (PSA)
- RoHS, REACH and UL 94 V-0 compliant

Typical Applications

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

Contact Information

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RoHS compliant

REACH COMPLIANCE

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SOFT-SHIELD® 4850 – Product Information

Table 1 - Typical Properties

Typical Properties	SOFT-SHIELD® 4850	Test Method
Compression-Deflection – 3 mm thick sample	25% - 2.5 psi (17.2 kPa) 50% - 4.3 psi (29.6 kPa)	ASTM C165 (Modified)
Through-Resistance	(See Figure 1)	--
Shielding Effectiveness – 20 MHz to 10 GHz	Average: 95 (dB)	CHO-TM-TP08
Gasket Compression Set	<15%	ASTM D3574
Tensile Strength – 3 mm thick sample	306 lbs/in² (68.3 kPa)	ASTM D412 (Modified)
Electrically Conductive Acrylic PSA Peel Strength	15 oz/inch	ASTM D1000 (Modified to 90° peel)
Recommended % Deflection Range	15 - 50%	--
Flammability	V-0	UL 94
Operating Temperature	-40° to 70°C	--
Recommended Storage Conditions @ 50% Relative Humidity	70°F ± 20 (21°C ± 10)	--
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.

Figure 1
Deflection vs Resistance - SS4850 w/Conductive PSA (4850-12) @ 0.05 in/min (1 sq inch area sample)

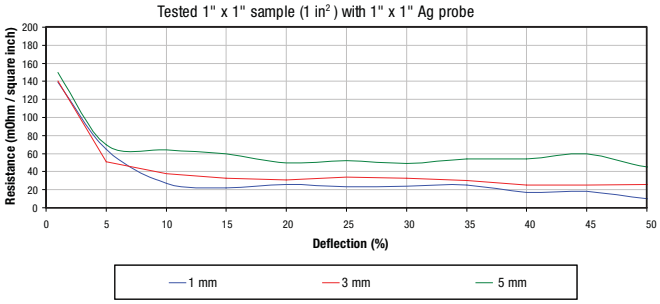
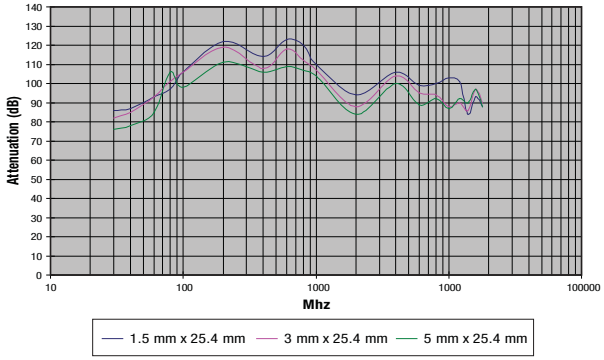


Figure 2
Shielding Effectiveness (dB)
Parker Chomerics SS4850 1" Wide with Conductive PSA



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	0100 = 1.0 (.039) 0150 = 1.5 (.060) 0200 = 2.0 (.078) 0300 = 3.0 (.118) 0400 = 4.0 .157) 0500 = 5.0 (.197)
	2 = Conductive PSA	1212 = 12" (305 mm) sq. sheet 2424 = 24" (610 mm) sq. sheet	

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

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

www.parker.com/chomerics

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