CHO-FOIL®

EMI Shielding Metal Foil Tapes

Customer Value Proposition

Parker Chomerics CHO-FAB™ Electrically Conductive Fabric Tape is ideal for applications requiring lighter weight and a more flexible electrically conductive tape than metal foil tapes provide. CHO-FAB tape provides excellent EMI shielding and good corrosion resistance. In the case of shielded cables, CHO-FAB tape is very conformable, strong, lightweight, and doesn't have sharp edges that are present on metal foil tapes.

CHO-FAB tape provides an economical solution to applications requiring excellent electrical conductivity across substrates and offers a low-impedance connection between a braided cable shield and the metal connector back shell in molded cables.

Seams of EMI shielded rooms and other shielded test enclosure setups are more easily sealed with CHO-FAB tape than metal foil tape to provide electrical continuity and thus higher shielding effectiveness.

Features and Benefits

- Made of fabric tape constructed from a nickel-plated silver conductive material
- Available with single-sided acrylic electrically conductive pressure sensitive adhesive (PSA)
- Lightweight and more flexible than metal foil tapes
- Excellent shielding and good corrosion resistance performance
- Lacks sharp edges that are present on foil tapes
- Very conformable while maintaining strength
- Available as rotary kiss cut parts on rolls, die-cut parts, or in slit roll widths from 0.5 in (12.7 mm) to 24 in (609.6 mm)
- Bulk roll lengths are 18 yards (16.5 m) or 36 yards (33 m)

Typical Applications

- Enclosure shielding
- Braided cables/wires
- Mating flanges
- Grounding

Contact Information

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CHO-FOIL® – Product Information

Table 1 - Typical Properties

Typical Properties	Typical Values						Test Method
Part Number Prefix	**CCH**	**CCE**	**CCJ**	**CCK**	**CCD**	**CAD**	
Foil Options	Rolled Annealed (RA) Copper 1 oz	RA Copper 1 oz Embossed	Aluminum	Tin-Plated Copper 1 oz	RA Copper 1 oz	Aluminum	–
Foil/Fabric Thickness, mils (mm)	1.4 (0.0356)	1.4 (0.0356)	2 (0.0508)	1.6 (0.0406)	1.4 (0.0356)	2 (0.0508)	–
Adhesive Types	Electrically Conductive, Pressure-Sensitive Acrylic or Non-Conductive, Pressure Sensitive Acrylic	Electrically Conductive, Pressure-Sensitive Acrylic					–
Adhesive Thickness, mils (mm)	1.5 (0.0381)				2 Sides: 1.5 each (0.0381 each)		–
Total Thickness, mils (mm)	2.9 (0.0737)	4 (0.1102)*	3.5 (0.0889)	3.1 (0.0787)	4.4 (0.11180)	5 (0.127)	–
Temperature Range, °F (°C)	-40 to 400 (-40 to 205)						–
Electrical Resistance, ohms/in² (ohms/cm²)	<0.003 (<0.0005)	<0.003 (<0.0005)	<0.010 (<0.0016)	<0.003 (<0.0005)	<0.010 (<0.0016)	<0.010 (<0.0016)	MIL-STD-202C Method 303
Flammability Resistance	V-0	MEETS V-0**	V-0	V-0	MEETS V-0**	MEETS V-0**	UL 94
Adhesion to Aluminum, oz/in [ppi] (N/m)	>40 [2.5] (438)						ASTM D1000
Outgassing, % TML (% CVCM)	0.11 (0.02)	0.09 (0.00)	0.17 (0.02)	Not Tested	Not Tested	Not Tested	ASTM E595
Shelf Life, months from date of shipment	24	24	24	24	24	24	–

* Embossing adds 1.1 mils
**Parker Chomerics internal test procedure

Ordering Information

Refer to Tables 2 and 3. All CHO-FOIL tapes are available in standard 18 yard (16.5 m) or 36 yard (32.9m) rolls or die-cut custom configurations. Replace XX with 18 or 36 for roll length in yards. See table 3 for the code for WWWW. Contact Parker Chomerics Applications Engineering for assistance with a custom configuration.

Table 2 - Part Numbering

Part Number	Foil Option	Adhesive Type	Maximum Roll Width
CCJ-XX-201-WWWW	Aluminum	Electrically Conductive Acrylic	24 (609.6 mm)
CAD-XX-201-WWWW	Aluminum	Electrically Conductive Acrylic (Double Sided)	24 (609.6 mm)
CCK-XX-101-WWWW	Tin-Plated Copper 1 oz	Electrically Conductive Acrylic	12 (304.8 mm)
CCKE-XX-101-WWWW	Tin-Plated Copper 1 oz Embossed	Electrically Conductive Acrylic	24 (609.6 mm)
CCH-XX-101-WWWW	RA Copper 1 oz	Electrically Conductive Acrylic	24 (609.6 mm)
CCD-XX-101-WWWW	RA Copper 1 oz	Electrically Conductive Acrylic (Double Sided)	12 (304.8 mm)
CCH-XX-301-WWWW	RA Copper 1 oz	Non-Conductive Acrylic	24 (609.6 mm)
CCE-XX-101-WWWW	RA Copper 1 oz Embossed	Electrically Conductive Acrylic	24 (609.6 mm)

Table 3 - Length and Width Options

Length Replace XX	Width Replace WWWW
18 = 18 Yard (16.5 m) Roll	0050 = 0.5 in (12.7 mm) 0100 = 1.0 in (25.4 mm)
36 = 36 Yard (32.9 m) Roll	0200 = 2.0 in (50.8 mm) 0300 = 3.0 in (76.2 mm) 0400 = 4.0 in (103 mm)

Table 4 - Performance Test Data

Test	Test Data							Test Method
Part Number Prefix	**CCH**	**CCE**	**CCJ**	**CCK**	**CCD**	**CAD**	**CFT**	
Pre-Bake								
Initial Surface Resistivity, milliohms*	<2	<2	<2	<2	N/A	N/A	<100	CHO-TP-57***
Initial Through Resistivity, milliohms*	<3	<3	<35	<2	<15****	<100****	<100	
Initial Peel Strength, oz/in [ppi] (N/m)	44.8 [2.8] (490)	44.8 [2.8] (490)	51.2 [3.2] (560)	46.4 [2.9] (508)	48 [3] (525)	70.4 [4.4] (710)	44.8 [2.8] (40)	ASTM-D1000
Initial Taber Abrasion Surface Resistivity, milliohms	<6	<3	<6	<9	N/A	N/A	<100	CHO-TP-57***
Heat Aging (185˚F [85˚C] @ 168 hrs)								
Surface Resistivity, milliohms*	<10	<2	<20	<2	N/A	N/A	<100	CHO-TP-57***
Through Resistivity, milliohms*	<16	<3	<22	<2	<7	<60	<150	
Peel Strength, oz/in [ppi] (N/m)**	57.6 [3.6] (630)	62.4 [3.9] (683)	76.8 [8] (840)	67.2 [4.2] (735)	73.6 [4.6] (805)	78.4 [4.8] (840)	59.2 [3.7] (648)	ASTM-D1000
Heat Aging (250˚F [121˚C] @ 168 hrs)								
Surface Resistivity, milliohms*	<10	<3	<20	<2	N/A	N/A	<100	CHO-TP-57***
Through Resistivity, milliohms*	<70	<3	<23	<2	<3****	<150****	<150	
Peel Strength, oz/in [ppi] (N/m)**	57.6 [3.6] (630)	59.2 [3.7] (648)	75.2 [4.7] (823)	51.2 [3.2] (560)	70.4 [4.4] (770)	84.8 [5.3] (928)	43.2 [2.7] (473)	ASTM-D1000
Heat + Humidity Aging (185˚F [85˚C] @ 168 hrs @ 95% RH)								
Surface Resistivity, milliohms*	N/A	N/A	N/A	<2	N/A	N/A	<100	CHO-TP-57***
Through Resistivity, milliohms*	N/A	N/A	N/A	<2	<115****	<150****	<150	
Peel Strength, oz/in [ppi] (N/m)**	N/A	N/A	N/A	78.4 [4.9] (858)	78.4 [4.9] (858)	84.8 [5.3] (928)	46.4 [2.9] (508)	ASTM-D1000
Salt Fog Corrosion @ 168 hrs								
Surface Resistivity, milliohms*	N/A	N/A	N/A	<2	N/A	N/A	<100	CHO-TP-57***
Through Resistivity, milliohms*	N/A	N/A	N/A	<2	<275****	<600****	<1000	
Peel Strength, oz/in [ppi] (N/m)**	N/A	N/A	N/A	76.8 [4.8] (840)	62.4 [3.9] (683)	80 [5] (875)	33.6 [2.1] (368)	ASTM-D1000
Taber Abrasion, 500 gramweight, CS-10 wheel @ 500 cycles								
Surface Resistivity, milliohms*	<3	<5	<2	<6	N/A	N/A	<175	-

N/A = Not Applicable
* All measurements of surface resistivity made at ambient temperature with tapes mounted on tinned copper substrate, except for taber abrasion where a plastic substrate was used.
** 90˚ peel strength tests were done on an Instron at 2 inches per minute with tapes on a 2024 aluminum substrate.
*** CHO-TP-57 available from Parker Chomerics on request.
**** Through resistivity measurements of double sided adhesive tapes done with tapes flanged between 2024 aluminum substrates.

NOTE: The above table represents actual experimental test data taken according to Parker Chomerics internal test procedures. This data differs from Table 1 due to differences in test methods.

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