

CHOMERICS

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Seals

- Conductive elastomers • Knitted wire mesh
- Conductive coatings, sealants, adhesives
- Cable shielding products • EMI/ESD shielding laminates
- Shielded vents and windows
- FCC/VDE and TEMPEST testing

LEADER IN EMI SHIELDING INNOVATION, DESIGN, AND TEST TECHNOLOGY

CHO-FAB™ and CHO-FOIL® Family of EMI Shielding Tapes with Conductive Adhesive

CHO-FAB™ tape is a corrosion resistant nickel-plated cloth coated with Chomerics' highly conductive pressure-sensitive adhesive. This adhesive contains a uniform dispersion of conductive particles that create a very low electrical resistance through the tape. This feature results in superior shielding performance in a wide variety of environmental conditions.

CHO-FAB tape is extremely strong, lightweight and has excellent conformability/wrapability to enhance shielding performance and appearance. Use of corrosion resistant nickel-plated cloth and Chomerics' superior metal-particle-filled conductive adhesive technology produces a tape used in a wide variety of EMI shielding and grounding applications.

CHO-FOIL® tapes are an economical EMI shielding solution for a variety of commercial uses. The tapes are available in copper, aluminum, or tinned copper foil backed with Chomerics' highly conductive pressure-sensitive adhesive. The copper version of CHO-FOIL tape meets the requirements of MIL-T-47012 and the tinned copper foil tape meets MIL-T-10727 for corrosion resistance.

CHO-FOIL and CHO-FAB shielding tapes are available in standard 36 yard length rolls, and die cut custom configurations*. For applications requiring surface conductivity only, copper tape is available with a non-conductive adhesive.



TYPICAL APPLICATIONS

- Provides a low impedance connection between a braided cable shield and the metal connector backshell in molded cables. An effective EMI shielded assembly can be achieved without soldering the tape to the braid or backshell.
- EMI radiation measurement troubleshooting, using CHO-FOIL tape to shield ventilation slots or seam gaps.
- Provides electrical continuity in seams of EMI shielded rooms and electronic enclosures.
- Supplies electrical contact to surfaces that can't be soldered to, such as conductive plastic or aluminum.
- EMI shield for cables by wrapping the tape around the cable. An overlap is recommended.
- ESD shielding.
- Provides corrosion-resistant ground contact points.
- Fabric tape available where weight and flexibility are important such as for wrapping cables.

*An embossed version of CHO-FOIL copper tape is available for a more attractive surface appearance.

continued

APPLICATION NOTES

1. To ensure maximum adhesion, remove all surface oils and dust from the areas to be taped.
2. When applying the tape, note that oils from the hand can affect adhesion.
3. These tapes are compatible with industry standard tape dispensers.

Technical Data

PROPERTY	TEST METHOD	TYPICAL VALUES						
Part Number Prefix	—	CCH	CCE	CCJ	CCK	CCD	CAD	CFT
Fabric/Foil Type	—	1 oz. RA Copper	1 oz. embossed RA Copper	Aluminum	1 oz. Tin-Plated Copper	1 oz. RA Copper	Aluminum	Nickel Plated Cloth
Fabric/Foil Thickness, mils (mm)	—	1.4 (.036)	1.4 (.036)	2 (.051)	1.6 (.041)	1.4 (.036)	2 (.051)	5 (.127)
Adhesive Type	—	Particle Filled Acrylic Pressure Sensitive						
Adhesive Thickness, mils (mm)	—	1.5 (.038)				2 sides: 1.5 each (.038 each)		1.5 (.038)
Total Thickness, mils (mm)	—	2.9 (.074)	4 (.110)	3.5 (.089)	3.1 (.079)	4.4 (.112)	5 (.127)	6.5 (1.651)
Temperature Range, °F (°C)	—	-40 to 400 (-40 to 205)						-40 to 180 (-40 to 82)
Electrical Resistance, ohms/in ² (ohms/cm ²)	MIL-STD-202C	<.003 (.0004)	<.003 (.0004)	<.010 (.002)	<.003 (.0004)	<.010 (.002)	<.010 (.002)	<.100 (.020)
Flame Resistance	UL Subject 510	PASS	MEETS	PASS	PASS	MEETS	MEETS	N/A
Adhesion to Aluminum oz./inch [ppj] (N/m)	ASTMD1000	>40 [2.5] (438)						

ORDERING INFORMATION

Standard rolls can be ordered through Chomerics' authorized distributors using these part numbers:

CCH – 36 – 101 – ZZZZ	Copper foil, conductive adhesive
CCE – 36 – 101 – ZZZZ	Copper foil, conductive adhesive, embossed
CCH – 36 – 301 – ZZZZ	Copper foil, non-conductive adhesive
CCJ – 36 – 201 – ZZZZ	Aluminum foil, conductive adhesive
CCK – 36 – 101 – ZZZZ	Tin plated copper foil, conductive adhesive
CCD – 36 – 101 – ZZZZ	Copper foil, conductive adhesive 2 sides
CAD – 36 – 101 – ZZZZ	Aluminum foil, conductive adhesive 2 sides
CFT – 36 – 101 – ZZZZ	Nickel-plated fabric, conductive adhesive

[ZZZZ](#) = WIDTH

050	100	150	200	300	400	600	800	1200	2400
0.5 in.	1.0 in.	1.5 in.	2.0 in.	3.0 in.	4.0 in.	6.0 in.	8.0 in.	12 in.	24 in.
12.7mm	25.4mm	38.1mm	50.8mm	76.2mm	102mm	152mm	203mm	305mm	610mm

(Other widths available up to 24 in. [61 cm])

Please consult Chomerics' Applications Engineering Department for assistance with a custom application involving a need for material in other than slit roll form.

NOTE: The following table represents actual experimental test data taken according to Chomerics internal test procedures. This data differs from the previous table due to differences in test methods.

Table A: Reliability Data

TEST		TEST METHOD	CCH	CCE	CCJ	CCK	CCD	CAD	CFT
Initial Surface Resistivity (SR) (milliohms)*		CHO-TP-57***	<2	<2	<2	<2	N/A	N/A	<100
Initial Through Resistivity (TR) (milliohms)*		CHO-TP-57***	<3	<3	<35	<2	<15****	<100****	<100
Initial Peel Strength OZ./inch [ppi] (N/m)**		ASTMD1000	44.8 [2.8](490)	44.8 [2.8](490)	51.2 [3.2](560)	46.4 [2.9](508)	48 [3.0](525)	70.4 [4.4](710)	44.8 [2.8](490)
Initial Taber Abrasion Surface Resistivity (SR) (milliohms)		CHO-TP-57***	<6	<3	<6	<9	N/A	N/A	<100
Heat Aging 185°F (85°C)/ 168 hrs.	SR (milliohms)* TR (milliohms)* Peel, OZ./inch [ppi] (N/m)**	CHO-TP-57*** CHO-TP-57*** ASTMD1000	<10 <16 57.6 [3.6](630)	<2 <3 62.4 [3.9](683)	<20 <22 76.8 [8.0](840)	<2 <2 67.2 [4.2](735)	N/A <7**** 73.6 [4.6](805)	N/A <60**** 78.4 [4.8](840)	<100 <150 59.2 [3.7](648)
Heat Aging 250°F (121°C)/ 168 hrs.	SR (milliohms)* TR (milliohms)* Peel, OZ./inch [ppi] (N/m)**	CHO-TP-57*** CHO-TP-57*** ASTMD1000	<10 <70 57.6 [3.6](630)	<3 <3 59.2 [3.7](648)	<20 <23 75.2 [4.7](823)	<2 <2 51.2 [3.2](560)	N/A <3**** 70.4 [4.4](770)	N/A <10**** 84.8 [5.3](928)	<100 <150 43.2 [2.7](473)
Heat Aging with Humidity 95% RH/ 185°F (85°C)/	SR (milliohms)* TR (milliohms)* Peel, OZ./inch [ppi] (N/m)**	CHO-TP-57*** CHO-TP-57*** ASTMD1000	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	<2 <2 78.4 [4.9](858)	N/A <115**** 78.4 [4.9](858)	N/A <150**** 84.8 [5.3](928)	<100 <150 46.4 [2.9](508)
Salt fog corrosion/ 168 hrs.	SR (milliohms)* TR (milliohms)* Peel, OZ./inch [ppi] (N/m)**	CHO-TP-57*** CHO-TP-57*** ASTMD1000	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	<2 <2 76.8 [4.8](840)	N/A <275**** 62.4 [3.9](683)	N/A <600**** 80 [5.0](875)	<100 <1000 33.6 [2.1](368)
Taber abrasion 500 gramweight, CS-10 wheel, 500 cycles	SR (milliohms)*	CHO-TP-57***	<3	<5	<2	<6	N/A	N/A	<175

N/A = Not Applicable

* All measurements of surface resistivity and through 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 Chomerics on request.

**** Through resistivity measurement of double sided adhesive tapes done with tapes flanged between 2024 aluminum substrates.



Chomerics
Div. of Parker Hannifin Corp.
77 Dragon Court
Woburn, MA 01888-4014
Tel: 781-935-4850
FAX: 781-933-4318

www.chomerics.com

Parker Hannifin PLC
Chomerics Division
Parkway, Globe Park
Marlow, Bucks., SL7 1YB, England
Tel: (44) 1628 486030 FAX: (44) 1628 890053
France Freephone Tel: (0590) 8170
Germany Freephone Tel: (0130) 818074

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