

CHO-BOND® 584 Conductive Adhesive System

DESCRIPTION

Chomerics' CHO-BOND 584 two-component, highly conductive adhesive system combines the good adhesive characteristics of epoxy with the superior conductivity of silver. In addition to being available in bulk form, the material is offered in the convenient premeasured "CHO-PAK™" for rapid application.

CHO-BOND 584 adhesive meets the most exacting electrical bonding requirements without the high temperatures, fluxes and expensive preparatory techniques usually needed to obtain effective lead-tin solder joints.

Fully cured CHO-BOND 584 adhesive exhibits a dc volume resistivity of 0.002 ohm-cm and is usable over a wide temperature range. Adhesion to copper, bronze, cold-rolled steel, aluminum, magnesium, kovar, nickel, ceramic, phenolic and plastic is excellent.

When used in machined seams, CHO-BOND 584 adhesive provides an excellent EMI shield; however, it should not be used for shielding light-weight, poorly toleranced enclosures. For these parts CHO-BOND® 360 adhesive, a coarser system, should be used (see Technical Bulletin 47). For all applications, CHO-BOND 584 adhesive performs well as a ground.

Because of its excellent adhesive properties, CHO-BOND 584 adhesive should not be used if the seam will be "broken" at a future time. As with most adhesives, bond strength deteriorates as the upper use temperature is exceeded. The fine particle, platelet-type pure silver filler generally assures a thin "glue line" in the range of 1-3 mils.



MATERIAL PROPERTIES AND SPECIFICATIONS		
Certified Properties:	584-29	584-208
Recommended Cure*	235°F (113°C) for 15 min.	212°F (100°C) for 45 min.
Volume Resistivity (max.)	.002 ohm-cm*	.005 ohm-cm*
Lap Shear (min.)	1200 psi (84.37 kg/cm²)*	700 psi (49.21 kg/cm²)*
Specific Gravity (±.2)	2.5	2.7
Shelf Life at 70°F (21°C)	9 Months (Bulk)	9 Months
From Date of Manufacture	12 Months (Bi-Paks)	
Typical Properties:		
Color	Silver-Gray	Silver-Gray
Consistency	Thin Paste	Medium Paste
Minimum Pot Life	30 Minutes	60 Minutes
Use Temperature	-67 to 257°F -55 to 125°C	-80 to 210°F -62 to 99°C
Coefficient of Thermal Expansion	49 in/in/°C x 10 ⁻⁶ 49µm/m/°K	49 in/in/°C x 10 ⁻⁶ 49µm/m/°K
Thermal Conductivity	8-10 Btu-in/ft²-°F-hr 1.2-1.5 watt/meter °K	8-10 Btu-in/ft²-°F-hr 1.2-1.5 watt/meter °K
Mix Ratio of 584 to Hardener	100:6.3 by weight	1:1 by weight
Lap Shear		
Cured at 70°F (21°C) for 24 hours	650 psi (45.7 kg/cm²)	800 psi (56.2 kg/cm²)
Cured 150°F (65°C) for 2 hours	900 psi (63.3 kg/cm²)	850 psi (59.7 kg/cm²)
Volume Resistivity (max.)		
Cured at 70°F (21°C) for 24 hours	.050 ohm-cm	.125 ohm-cm
Cured at 150°F (65°C) for 2 hours	.009 ohm-cm	.005 ohm-cm

*For detailed test procedures, contact Chomerics

CHO-BOND® 584 adhesive *continued*

CHO-BOND 584 adhesive is available with two hardener systems. Hardener 29 combines room temperature cure capability with low viscosity, and hardener 208 provides room temperature cure and easy 50/50 mix ratio.

GENERAL PROCESSING INSTRUCTIONS

The mix proportion of self-contained

CHO-PAK kits is conveniently premeasured. Simply squeeze or roll the two-chambered packet for a minute, snip off the end and apply. CHO-PAKs eliminate waste and weighing errors. Bulk material should be thoroughly mixed with a spatula (1 to 2 minutes) at high shear. Mixed resin may then be applied to surfaces cleaned with solvent such as trichlorethylene or toluene. Better adhesion can be obtained with a sand blasted or

chemically etched surface. CHO-BOND 584 can be applied by spatula, dispensed from a syringe with 27 (max.) ga. needle, or silk screened.

Store unmixed components in tightly closed containers in a cool place. Do not dilute CHO-BOND 584 with any solvent without prior discussion of application details with Chomerics.

ORDERING INFORMATION

Product Number	Part Number	Unit/Size
CHO-BOND 584-29	50-10-0584-0029	1.0 gram CHO-PAK
CHO-BOND 584-29	50-02-0584-0029	2.5 gram CHO-PAK
CHO-BOND 584-29	50-03-0584-0029	10 gram CHO-PAK
CHO-BOND 584-29	50-01-0584-0029	1 pound kit
CHO-BOND 584-29	50-00-0584-0029	3 ounce kit
CHO-BOND 584-208	50-01-0584-0208	1 pound kit
CHO-BOND 584-208	50-00-0584-0208	3 ounce kit

CHOMERICS



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