500ºF ELECTRICALLY CONDUCTIVE ADHESIVE

For High Power Applications

500ºF - DURALCO™ 120

Resistance is 0.00008 ohm-cm

Just Mix and Apply

Cures at Room Temperature

Ideal for All Applications

Duralco™ 120 Epoxy Adhesive Forms Super Electrically Conductive Bonds for continuous use from -50ºF to +500ºF.

This epoxy contains over 70% Ultra Fine, Active Silver providing the ultimate in electrical conductivity.

Resistance measurements of 0.00008 ohm-cm has been reported in many independent tests.

Duralco™ 120 has excellent adhesion to copper, steel, stainless, aluminum, lead, glass, ceramics, plastics and dissimilar materials.

Cures at room temperature or mild heat to offer superior resistance to moisture, most chemicals and solvents.

Duralco™ 120 is commonly used in place of solder for electrically conductive bonds, bonding heat sensitive components, etc.

Using Duralco™ 120 instead of solder avoids exposing parts to soldering temperatures, flux contamination in addition to simplifying lab or production processing of parts.

Applications Include: bonding circuits, solder replacement, bonding semi-conductors, EMI shielding, thermistors, wire tacking, heating elements, assembling electronics, etc.

Users Report:

Duralco™ 120 was used for an application at 200ºC for over 12 months with no degradation in electrical conductivity.

Duralco™ 120 successfully bonded bus bars and carried a current of 2400 amps for a short term test.

Duralco™ 120 bonds sputtering targets to copper based plates and provides 100ºC continuous service.

Duralco™ 120 is the ideal choice for high power, high temperature, electronic or industrial application requiring high electrical conductivity.

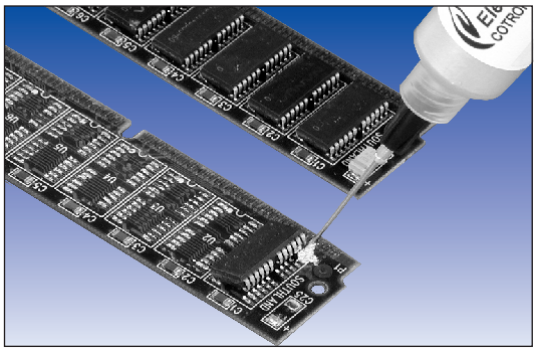
Availability:

Cat. No.	Description	Temp.
Duralco™ 120-1. .	2 oz. Kit	.500°F

Pre-Measured Kits

Each Unit Contains: 1 jar of resin, 1 syringe of hardener and 1 mixing stick. *(See Page 19 for details)*

EE 120-2 . . . . . .Three - 10gm units/box
EE 120-3 . . . . . .Six - 10gm units/box
EE 120-10 . . . . . .Ten - 10gm units/box



Duralco™ 120 in A Surface Mount Application

Duralco™ 120 Bonds Leads to an Instrument Assembly

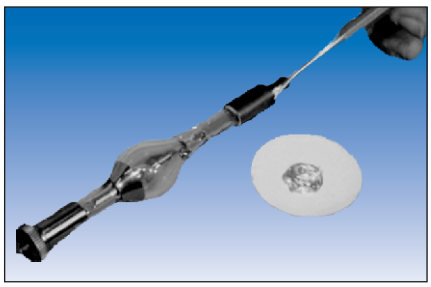
Physical Properties

Max. Use Temperature		500°F
Color		Silver
Base		Ultra Fine Silver
Mixed Viscosity		Smooth Fine Paste
Mixed Density (gms/cc)		3.8
Hardness (Shore D)		70
Lap Shear Strength (psi)		1500
Flexural Strength (psi)		1150
Compressive Strength (psi)		600
Thermal Expansion		4.1 x (10^{-5}/ºC)
Volume Resistivity (ohm-cm)		0.00008
Mix Ratio		100/3.4
Thermal Conductivity*		50
Components		2
Cure	R.T.	16 hrs.
	100ºF	4 hrs.
	150ºF	2 hrs.
	200ºF	10 min.
	250ºF	7 min.

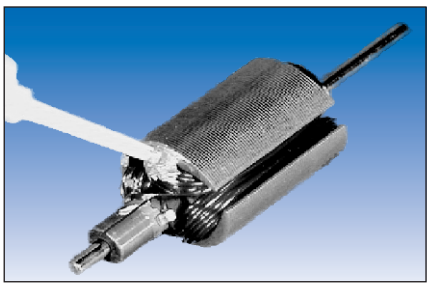
*(BTU-in/Hr. ft^2°F)

650ºF ELECTRICAL CONDUCTIVE ADHESIVES

For Electronic and Industrial Applications



Duralco™ 120 Replaces Soldering in an Lamp Assembly



Duralco™ 120 Provides Conductive Paths In a High Temp. Motor

Duralco™ 125 Replaces Soldering on a Circuit Board

Duralco™	120	122	124	125	126	127
Major Constituent	**Silver**	**Nickel**	**Silver**	**Silver**	**Silver**	**Graphite**
Features	Hi-Conductive	Low Cost	Hi-Temp.	Flexible	One Component	Low Cost
Max. Temperature °F	500	500	650	450	450	400
Volume Resistivity (ohm-cm)	0.00008	0.7	0.002	0.002	0.002	0.02
Thermal Cond. (BTU-in/hr.ºF Ft^2)	50	15	50	40	50	25
Mixed Viscosity (cps)	Smooth Fine Paste	Smooth Fine Paste	Smooth Fine Paste	Smooth Fine Paste	Smooth Fine Paste	Smooth Fine Paste
Cure Cycle Hrs. @75°F	16 - 24	16 - 24	4hr.@ 250	16-24	½ hr.@ 275	16 - 24
Cure Cycle @ 200°F	10 min.	10 min.	N.A.	20 min.	10 min @ 325	20 min.
Color	Silver	Silver	Silver	Silver	Silver	Black
No. of Components	2	2	2	2	1	2
Size ounces	2	4	2	1	2	2.5

Duralco™ Conductive adhesives and potting compounds provide the conductivity required for many high temp. electronic and industrial applications.

These Ultra Temp. Adhesives combine Cotronics' unique resins and hardeners with specialty conductive fillers to provide continuous service up to 650ºF.

They will bond to glass, ceramics, metals and plastics and offer excellent resistance to most chemicals and solvents.

Applications Include: Solder replacement, semi-conductor bonding, shielding, electronics, circuit board repair, etc.

Duralco™ 120 500ºF Silver Based

A Silver filled epoxy that cures at room temp. to form electrically conductive bond lines for use to 500ºF.

Contains over 70% Ultra Fine Active Silver to provide the ultimate in electrical conductivity. Resistance of 0.00008 ohm-cm have been reported in independent tests.

Duralco™ 120 is ideal for forming electrically conductive bonds, attaching heat sensitive components and as a solder replacement.

Duralco™ 122 500ºF Nickel Based

This Nickel filled adhesive and casting epoxy was specially formulated to provide an economical alternative to silver filled, electrically conductive epoxies.

Duralco™ 122 is low in cost and highly conductive.

It is ideal for use in applications where the upmost in electrical conductivity is not required.

Can be used to 500°F.

Duralco™ 124 650°F Ultra Temp Silver Based

A two component, silver filled adhesive for High Power applications

Just mix and cure with mild heat. Can be used up to 650°F.

Users report: Duralco 124 provided a conductive bond for over 6 months at 650°F.

Duralco™ 125 450ºF Flexible Conductive Silver Based

Easy to use, "one to one", applicator kit. Just dispense, mix and apply this smooth creamy paste and cure at room temp.

Bonds to most metals, ceramics, and plastics to form stress free, electrically conductive bonds.

Duralco™ 126 450ºF One Component, Silver Filled

A one component, highly conductive epoxy specifically designed for production applications. No mixing. no mess. Just dispense and heat cure.

Commonly used in automatic dispensing equipment.

Duralco™ 127 400ºF Graphite Based Dispenser Kit

Easy to use, "one to one", applicator kit. Just dispense, mix and apply. This smooth creamy paste cures at room temp. and is ideal for low cost production applications. Can be used in automatic dispensing equipment.

Cat. No.	Temp	Size
Duralco™ 120-1	500°F	2 oz
Duralco™ 122-1	500°F	4 oz
Duralco™ 124-1	650°F	2 oz
Duralco™ 125-2	400°F	1 oz
Duralco™ 126-1	450°F	2 oz
Duralco™ 127-1	400°F	2 oz