

3MS.022

Electrically Conductive Adhesives



Summary

Overview

OVERVIEW

SAFETY

Duralco™ 120

Duralco™ 122

Duralco™ 124

Duralco™ 125

Duralco™ 126

Duralco™ 127

TECHNICAL DATA

Physical variables included in this documentation are provided by way of indication only and do not, under any circumstances, constitute a contractual undertaking. Please contact our technical service if you require any additional information.

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The combination of Cotronics adhesives and filled hardeners makes it possible to obtain the electrical conductivity required for certain applications.

General properties

- Electrical conductors
- Excellent resistance to chemicals and solvents

General applications

- Bonding on glass, ceramics, metals and plastics
- Solder replacement in electronics
- Attaching transistors
- Circuit board repair
- Tacking conductor tracks

General implementation

- Cures at room temperature
- Heat curing (accelerated curing) at 120 °C or above

Safety

The legal information and safety guidelines are provided in the safety data sheets available to you.

Avoid contact with the skin. Wear gloves at all times.

In case of contact with the skin:

NEVER clean adhesive on the skin with an organic solvent.

Any contact with adhesive or organic solvent can cause irritation to the skin.

Use soap and water to clean the skin, or, failing that, special hand wash pastes.

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Electrically Conductive Adhesives



Duralco™ 120 – Silver filler

Properties

- Filler: active silver powder, ultra-fine particles
- Maximum operating temperature: -30 to +260 °C

Implementation

- Curing: 24 hours at room temperature
- Post-curing: 1 hour at 120 °C

Duralco™ 122 – Nickel filler

Properties

- Filler: nickel
- Peak temperature: 260 °C
- Economical

Implementation

- Curing: 24 hours at room temperature
- Post-curing: 24 hours at 120 °C

Duralco™ 124 – Ultra high temperature

Properties

- Filler: silver
- The most effective Cotronics adhesive
- Peak temperature: 340 °C

Implementation

- Fast curing: 4 hours to 120 °C
- Post-curing: 4 hours at 177 °C

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Duralco™ 125 - Flexibility

Properties

- Filler: silver
- Flexible
- Peak temperature: 230 °C

Implementation

- Curing: 8 hours at room temperature
- Fast curing: 30 minutes at 65 °C

Duralco™ 126 -One-composant

Properties

- Filler: silver
- Peak temperature: 230 °C

Implementation

- Fast curing: 1-2 hours at 120 °C minimum
- Easy to apply (one-component)

Duralco™ 127 – Graphite filler

Properties

- Filler: graphite
- Peak temperature: 200 °C
- The most economical

Implementation

- Curing: 24 hours at room temperature

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Electrically Conductive Adhesives



Technical Data

Property	Unit	120	122	124	125	126	127
Peak temperature	°C	260	260	340	230	230	200
Colour		silver	silver	silver	silver	silver	black
Components		2	2	2	2	1	2
Viscosity	cps	25,000	25,000	20,000	50,000	15,000	50,000
Filler		silver	nickel	silver	silver	silver	graphite
Thermal Conductivity	W.m ⁻¹ .K ⁻¹	7.2	2.16	7.2	5.76	7.2	3.6
Resistivity	Ω.m	8.10 ⁻⁷	7.10 ⁻³	2.10 ⁻⁵	2.10 ⁻⁵	2.10 ⁻⁵	2.10 ⁻⁴
Cure at Room Temperature		24 hrs	24 hrs	-	8 hrs	-	24 hrs
Fast Cure		-	-	4 hrs at 120 °C	30 min at 65 °C	1-2 hrs at 120 °C 30 min at 135 °C 1-5 min at 150 °C	-
Post Cure		1 h at 120 °C	24 hrs at 120 °C	4 hrs at 177 °C	-	-	-

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