

3MS.022

Electrically Conductive Adhesives



Summary

Overview

OVERVIEW

SAFETY

Duralco™ 120

Duralco™ 122

Duralco™ 124

Duralco™ 125

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.

Final Advanced Materials Sàrl
4 avenue de Strasbourg
68350 Didenheim – France
Tel : +33 (0) 3 67 78 78 78

Final Advanced Materials GmbH
Basler Strasse 115
79115 Freiburg – Deutschland
Tel: + 49 (0) 761 47 87 336

www.final-materials.com

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.

info@final-materials.com

3MS.022

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
- Operating 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
- Operating temperature: 340 °C

Implementation

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

3MS.022 **Electrically Conductive Adhesives**



Duralco™ 125 - Flexibility

Properties

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

Implementation

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

Duralco™ 127 – Graphite filler

Properties

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

Implementation

- Curing: 24 hours at room temperature

3MS.022

Electrically Conductive Adhesives



Technical Data

| Property | Unit | 120 | 122 | 124 | 125 | 127 |
|--------------------------|------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Operating temperature | °C | 260 | 260 | 340 | 230 | 200 |
| Colour | | silver | silver | silver | silver | black |
| Components | | 2 | 2 | 2 | 2 | 2 |
| Viscosity | cps | 25,000 | 25,000 | 20,000 | 50,000 | 50,000 |
| Filler | | silver | nickel | silver | silver | graphite |
| Thermal Conductivity | W.m ⁻¹ .K ⁻¹ | 7.2 | 2.16 | 7.2 | 5.76 | 3.6 |
| Resistivity | Ω.m | 8.10 ⁻⁷ | 7.10 ⁻³ | 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 | - |
| Post Cure | | 1 h at 120 °C | 24 hrs at 120 °C | 4 hrs at 177 °C | - | - |

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.