

3MS.023

Thermally Conductive Adhesives



Summary

Overview

OVERVIEW

SAFETY

Duralco™ 128

Duralco™ 132

Duralco™ 133

Duralco™ 134

Duralco™ 135

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 thermal conductivity required for certain applications.

General properties

- Thermal conductors
- Excellent resistance to chemicals and solvents

General applications

- Bonding to glass, ceramics, metals and plastics
- Electronic components
- Fixing transistors, radiators and coolants
- Photovoltaic components
- Ceramic mounting bases

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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Duralco™ 128 – Ceramic filler

Properties

- Filler: ceramic
- Operating temperature: 260 °C
- High dielectric strength

Implementation

- Curing: 24 hours at room temperature
- Post-curing: 1 hour at 120 °C followed by 1 hour at 175 °C

Duralco™ 132 – Optimal thermal exchanger

Properties

- Filler: aluminium
- Operating temperature: 260 °C
- Excellent thermal exchanger

Implementation

- Curing: 24 hours at room temperature
- Post-curing: 4 hours at 120 °C

Duralco™ 133 – Ultra high temperature

Properties

- Filler: aluminium
- Operating temperature: 315 °C with post-curing

Implementation

- Fast curing: 4 hours to 120 °C
- Post-curing: 4 hours at 175 °C

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Duralco™ 134 – Ceramic filled grease

This product is not a bonding product but a non-hardening grease. There is no curing: the product does not harden.

Properties

- Filler: ceramic
- Operating temperature: 260 °C
- Thermally conductive grease
- Non-hardening
- Electrically insulating

Implementation

- Application in layers between components and heat sinks
- Easy replacement thanks to its texture
- No curing

Duralco™ 135 -Aluminium filled grease

Properties

- Similar to Duralco™ 134 but with better thermal transfer
- Filler: fine aluminium powder
- Operating temperature: 260 °C

Implementation

- Application in layers between components and heat sinks
- Easy replacement thanks to its texture
- No curing

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Thermally Conductive Adhesives



Technical Data

| Property | Unit | 128 | 132 | 133 | 134 | 135 |
|--------------------------|------------------------------------|-------------------------------|-----------------|-----------------|------------------|-----------|
| Operating Temperature | °C | 260 | 260 | 315 | 260 | 260 |
| Colour | | amber | silver | silver | amber | grey |
| Components | | 2 | 2 | 2 | 1 | 1 |
| Viscosity | cps | 79,000 | 15,000 | 36,500 | grease | grease |
| Filler | | ceramic | aluminium | aluminium | ceramic | aluminium |
| Thermal Conductivity | W.m ⁻¹ .K ⁻¹ | 2.88 | 5.76 | 5.76 | 5.04 | 5.76 |
| Resistivity | Ω.m | 10 ¹³ | 10 ⁴ | 10 ⁴ | 10 ¹⁴ | - |
| Cure at Room Temperature | | 24 hrs | 24 hrs | - | - | - |
| Fast Cure | | - | - | 4 hrs at 120 °C | - | - |
| Post Cure | | 1 h at 120 °C + 1 h at 175 °C | 4 hrs at 120 °C | 4 hrs at 175 °C | - | - |



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