

Technical Info Sheet

HCA 2-009 Heat-Conductive Adhesive

Thermosetting polymer

1. Description

HCA 2 - 009 is a thermosetting, one-component, solvent-free Heat-Conductive Adhesive, designed for the connection of bare dies and heat sinks on different substrates to control the thermal management of the components.

Key Benefits

- HCA for PCB-applications
- Good Thermal Conductivity
- Solvent-free, one-component
- High adhesion
- Low ionic contamination

2. Typical properties of the Uncured Adhesive

	HCA 2-009
Viscosity ¹⁾	23 - 29 Pas
Processing Life ²⁾	approx. 15 h
Minimum durability ³⁾	6 months

- 1) At shear rate $D=50 \text{ s}^{-1}$. plate-cone system with cone 2° temperature: 23°C .
- 2) Time at room temperature ($23 \pm 3^\circ\text{C}$) during which the glue can be processed.
- 3) From the date of production, stored in the freezer at $-40^\circ\text{C} \pm 5^\circ\text{C}$.

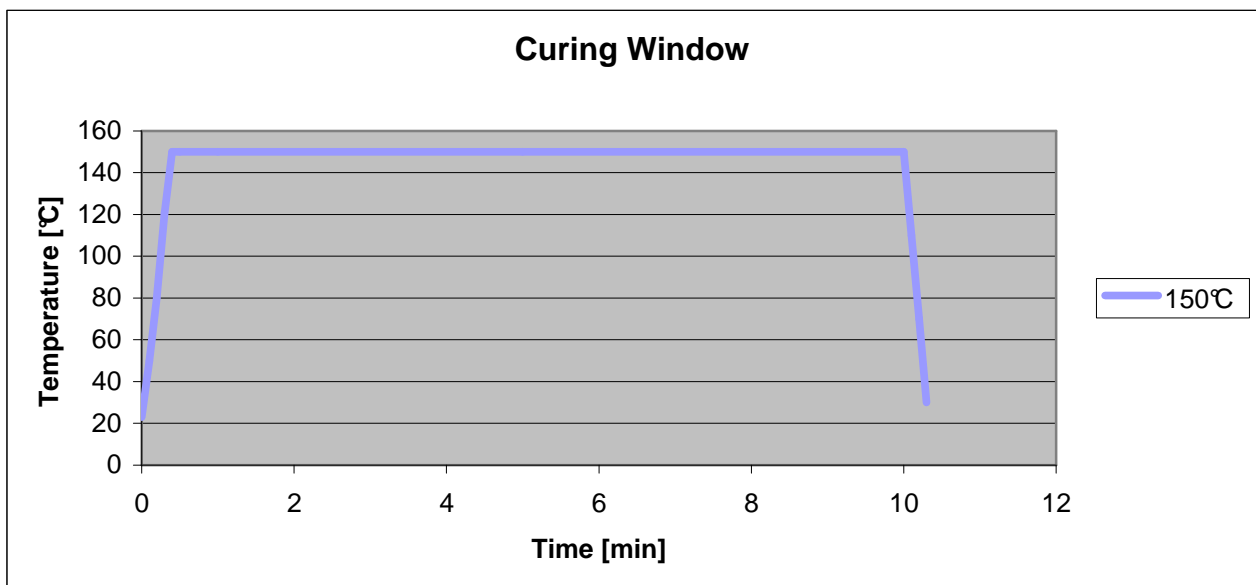
3. Recommended Processing

- Substrate Materials: PCB, Ceramic
- Recommended surface: Ag and Ni/Au
- Ensure that the adhesive has reached room temperature before opening, to prevent condensation.
- After using, put them back directly into the freezer. Don't cycle the HCA more than three times.

4. Typical properties of the cured Adhesive HCA 2-009

HCA 2-009	
Curing Conditions:	
Peak temperature	10' / 150°C
Thermal Conductivity	1,3 – 1,6 W/m K
Adhesion (DIN EN 1465)	max. 12 N/mm ²
Elongation at Tear (ISO 527-2)	max 0,9%
E-Module (ISO 527-2)	approx. 6000 MPa
Glass Transition Temperature	60 °C
Weight Loss during Curing Process at 150°C	max 0,12%
Weight Loss at 250°C / 1 h	max 1,8%
Water absorption ¹⁾	max. 0,3%
Impurities: Cl ⁻	max. 150 ppm
CTE < Tg	max. 35 ppm
CTE above Tg	max. 110 ppm
TGA@150°C	max 0,12%
TGA@200°C	max 1,2%

1) @85°C and 85% R.H.



5. Cleaning

Before Curing:

- The uncured adhesive can be removed with Zestron HC and other Zestron and Vigon cleaning materials.
- The cleaned parts must be completely dry before installing them in the machine..

After Curing:

- Defective components can easily be replaced by heating (with hot air) the cured adhesive joint above 250°C.
- The hot remaining adhesive can be removed with a sharp tool.

6. Packing

In jars with 100g

7. Storage

Outside the freezer avoid exposure to sunlight and high humidity.

In syringes:

6 month from the date of production, stored in the freezer at $-40^{\circ}\text{C} \pm 5^{\circ}\text{C}$.

H.W.H / 311008

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