

PD 860002 SA, PD 860002 SPA SMT-Adhesives

Thermosetting Polymer SMT Adhesives

Description

PD 860002 SA and PD 860002 SPA are thermosetting single-component, solvent-free polymer adhesives, developed especially for the surface mounting of SMT components on to PCBs and for use on bare substrates.

Special advantages of PD 860002

- high reliability by dispensing, printing and pin-transfer application
- no stringing
- excellent adhesion
- high green strength, especially SA version
- high dot profiles are possible
- single-component
- high surface insulation resistance (SIR)
- low curing temperature and short curing times
- constant batch-to-batch quality

Physical characteristics

Colour: red
Density: 1.2 g/cm³
Glass transition temp.: 79 °C
Thermal conductivity: 0.45 W/(m·K)
Homogeneity: no particle >50 Micron

Adhesion: ≥ 25 N/mm² at room temperature,
 after curing in conventional box oven, 4 min /125 °C,
 Cu-nail on steel plate test.

Viscosity

Haake Rotovisco RV 20, PK 100, PK I/2 °T,
 plate/cone, without border, temperature: 23 °C
 Program: ascending curve 0-40 s⁻¹, 6 min

Shear rate D	Viscosity ascending curve [Pa·s]	
[s ⁻¹]	Versions SPA	Version SA
30	25 - 50	24 - 90

Electrical characteristics

SIR-Surface insulation resistance:

1. According to Siemens norm SN 59651 after storage in climatic chamber 40 °C/93% RH:
 4d: 2.2 x 10⁹ Ω
 21d: 1.8 x 10⁸ Ω
2. According to ASTM-D-257 (Volume resistivity)
 1.9 x 10¹⁶ Ωcm

Dielectric constant (1 kHz, 1.5V): 4 ± 1

Dissipation factor (1 kHz, 1.5V): < 0.02

Processing

PD 860002 is available in 2 versions: SA and SPA.

It is suitable for machine and manual dispensing (SA and SPA versions).

The SPA version is made for small and medium sized components (up to SO28). SA version can be used both for big and small components.

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Curing

Max. curing temperature should not be higher than 160 °C.
The min. curing times are shown in the following list.

	100 °C	120 °C	130 °C	140 °C	150 °C
IR-curing					
(Peak zone)	9'	3'	2.5'	2'	1.5'
Box oven	10'	4'	3'	2.5'	2'

Cleaning

Before curing:

The uncured adhesive can be removed with Zestron HC and other Zestron and Vigon cleaning materials - see separate application recommendations.

The cleaned parts must be completely dry before installing them in the machine.

After curing:

Because of the known residual thermoplasticity of the cured adhesive, defective components can be easily replaced by heating (with hot air) the cured adhesive joint above 100 °C. After removing the component (torsion movement), the hot air should be focused on the remaining adhesive in order to remove it with a sharp tool.

Packing

The adhesives are available in various machine-specified syringes.

Storage

Storage time:

6 months at room temperature of 15 - 23 °C.

Don't store the glue in the refrigerator, crystallisation can occur.

The descriptions and engineering data shown here have been compiled by Heraeus using commonly-accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use, or any patent infringement resulting from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for a particular application.

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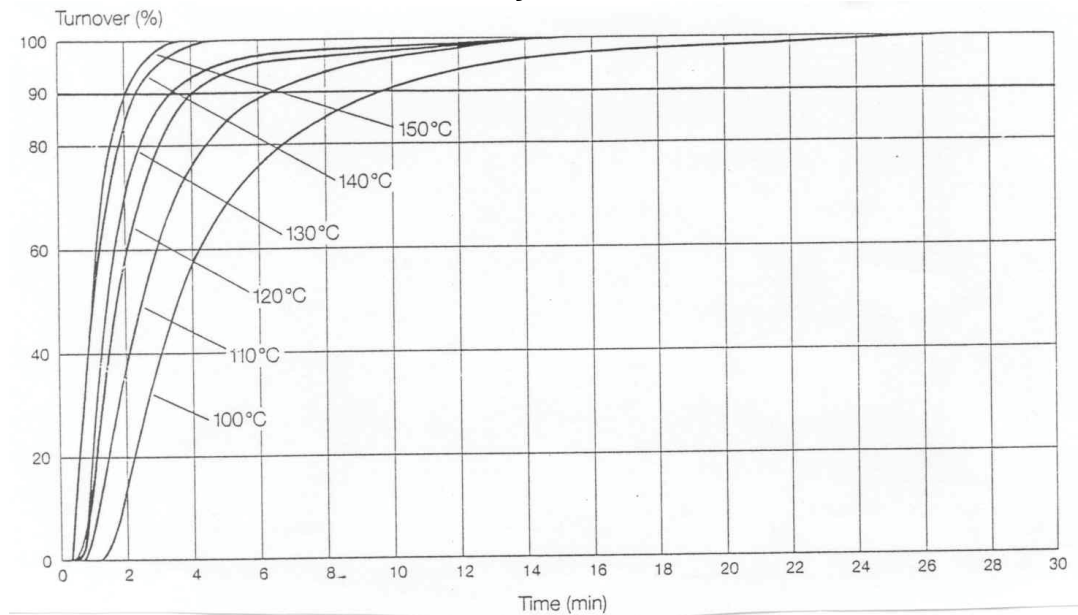
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Thermal Analysis of PD 860002



Curing time is depending on the temperature. We recommend to reach app. 90 % turnover in the oven.

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