

Product Information

**Adhesive System**

Thermal Management

Thermal cure

**Elan-glue<sup>®</sup> EP 5340**

Provisional

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## Product description

Elan-glue® EP 5340 is a visco-plastic filled, solvent free 1-component formulation based on epoxy resin. The Elan-glue® EP 5340 is suitable for huge range of adhesive applications. It has an excellent adhesion on common substrates and high thermal conductivity.

Elan-glue® EP 5340 satisfies the requirements of ROHS.

## Areas of application

Elan-glue® EP 5340 is used as glue for thermal management applications.

## Properties of the cured material

Good adhesion  
Good resistance to thermal shocks  
Low shrinkage on curing  
Resistant to moisture and migration  
Resistant to organic and inorganic solvents  
Solvent Free  
good thermal conductivity

## Storage

Elan-glue® EP 5340 can be stored for 6 months at <8°C.

The pot life at RT of Elan-glue® EP 5340 is 1 week.

## Processing suggestions

Elan-glue® EP 5340 should be applied directly from the packages with a suitable nozzle.

The packages should be allowed to reach their application temperature of 25°C°C, before use to allow the viscosity to reach the specified level.

Curing at  
e.g. 120°C@3h

Increased temperatures can reduce the curing time. Heating in a conventional oven is suitable for curing.

To ensure satisfactory adhesion on the PCB surface the following should be checked:

- Use of residue-free substrates
- ensure dry surfaces
- Check compatibility of the glue resin with the surfaces

**Table 1 - Properties of materials as supplied**

Property	Condition	Value	Unit
Colour		beige	
Viscosity; D=25/s plate/plate	25°C	100±30	Pas
Yield point	25°C		Pa s
Density DIN 53217	25°C	2,3	g/cm <sup>3</sup>
Shelf Life;	<8°C	6	months
Chlorine content (hydrolysis) (H <sub>2</sub> O / 2bar / 120°C)	Siemens method F12-F5241		ppm

**Table 2 – Thermal Properties of cured compound**

Property	Condition	Value	Unit
Temperature Range			°C
CTE (TMA)	$\alpha_1$		10 <sup>-6</sup> /K
	$\alpha_2$		10 <sup>-6</sup> /K
Thermal conductivity		1	W/mK
Thermal stability (mass loss)			%

**Table 3 - Mechanical properties of cured compound (curing 3h @ 120°C)**

Property	Condition	Value	Unit
Density DIN 16945	25°C	2,3	g/cm <sup>3</sup>
Hardness DIN 53505	25°C		Shore D
Glass transition temperature (DSC)		115	°C
Shear resistance on Aluminum (Twist-o-meter)	20°C	60	N/mm <sup>2</sup>
	80°C	40	N/mm <sup>2</sup>
Peel resistance			N/mm
E-Modul			N/mm <sup>2</sup>
Filler Content			weight-%

**Table 4 – Chemical Properties of cured compound**

Property	Condition	Value	Unit
Water Absorption DIN 53495	7 days		%

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