

Product Information

Adhesive System

Glob Top

UV curing / Thermal cure

Elan-glue[®] EP 5611

Provisional

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Product description

Elan-glue® EP 5611 is a dual curing high viscos filled thixotropic 1-component formulation based on epoxy resin.

The Elan-glue® EP 5611 is suitable for huge range of adhesive applications. It has an excellent adhesion on common substrates.

Elan-glue® EP 5611 satisfies the requirements of ROHS.

Areas of application

Elan-glue® EP 5611 is used as glue for chemical protection of parts (e.g. plastics and metals) against moisture and contamination and for securing large components on the board against mechanical shock and vibration.

Elan-glue® EP 5611 is used for Glop Top application.

The applied material will remain in place during curing. The cured product is semi flexible and will not damage sensitive components under thermal stress, including low temperatures.

Properties of the cured material

Good adhesion plastics and metals
Low shrinkage on curing
Resistant to moisture and migration
Resistant to organic and inorganic solvents
Solvent Free
Good resistance to thermal shocks
Curing up to 2mm is possible

Storage

Elan-glue® EP 5611 is a frozen product. It can be stored in the dark for 12 months at <-25°C.

The pot life at 25°C of Elan-glue® EP 5611 is 1 week. (in the darkness)

Processing suggestions

Elan-glue® EP 5611 should be applied directly from the packages with a suitable nozzle.

The packages should be allowed to reach their application temperature, 25 to 30 °C, before use to allow the viscosity to reach the specified level.

UV curing e.g.

1-3s at 50 mW/cm² UVA, λ = 300-400nm
1-3s at 50 mW/cm² UVA + 30min@150°C

Thermal Curing (without UV)

150°C @ 30min or
140°C @ 60min or
130°C @ 90min or
120°C @ 120 min

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		brownish-grey	
Viscosity; D=50/s; Z3	25°C	32.500 ± 7.500	mPas
Yield point	25°C		Pa s
Density DIN 53217	25°C	1,63	g/cm ³
Shelf Life in unopened original packaging	< -25°C	12	months

Table 2 – Thermal Properties of cured compound

Property	Condition	Value	Unit
Temperature Range			°C
CTE, below tg	α_1	41	10 ⁻⁶ /K
Thermal conductivity		0,46	W/mK
Thermal stability (mass loss @ 300°C)	TG, 10K/min	<1,5	%

Table 3 - Mechanical properties of cured compound (curing 0,5h @ 150°C)

Property	Condition	Value	Unit
Density DIN 16945	25°C		g/cm ³
Hardness DIN 53505	25°C	>90	Shore D
Glass transition temperature (DSC)		150 ± 4	°C
Shear resistance on Aluminum (micro-tester)		>15	N/mm ²
on plastics		>3	N/mm ²
Peel resistance			N/mm
E-Modul (DMTA)	20°C	7.600	N/mm ²
Filler Content			weight-%

Table 4 – Chemical Properties of cured compound

Property	Condition	Value	Unit
Water Absorption DIN 53495	7 days		%

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