

Product Information

Adhesive System

Surface Mount Adhesives

UV curing / Thermal cure

Elan-glue[®] EP 5610

Provisional

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Product description

Elan-glue® EP 5610 is a dual curing low viscos unfilled 1-component formulation based on epoxy resin.

The Elan-glue® EP 5610 is suitable for huge range of adhesive applications. It has an excellent adhesion on common substrates.

Elan-glue® EP 5610 satisfies the requirements of ROHS.

Areas of application

Elan-glue® EP 5610 is used as glue for chemical protection of parts (e.g. PCBs, plastics, Metals, glass) against moisture and contamination and for securing large components on the board against mechanical shock and vibration.

Elan-glue® EP 5610 is used for fixing parts, especially UV – tight parts, in a short time.
(dispensing-UV-fixing)

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 on many substrates
Low shrinkage on curing
Resistant to moisture and migration
Resistant to organic and inorganic solvents
Solvent Free
Good resistance to thermal shocks
Fixing parts in a short time
Curing up to 5mm is possible

Storage

Elan-glue® EP 5610 is a frozen product. It can be stored in the dark for 6 months at <8 °C. At 23°C ± 5°C it can be stored for 3 months.

The pot life at 25°C of Elan-glue® EP 5610 is 3 months. (in the darkness)

Processing suggestions

Elan-glue® EP 5610 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

5-30s at 25-150mW/cm² UVA + xh RT

5-30s at 25-150mW/cm² UVA + 5min@110°C

Thermal Curing (without UV)

150°C@1h

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		Colourless/yellowish	
Viscosity; D=150/s; Z3	25°C	1.000 ± 100	mPas
Yield point	25°C		Pa s
Density DIN 53217	25°C	1,2	g/cm ³
Shelf Life in unopened original packaging	+5 ± 2 °C	6	months
	23 ± 5°C	3	months

Table 2 – Thermal Properties of cured compound

Property	Condition	Value	Unit
Temperature Range		to 150	°C
CTE (T _g – 20°C)	α ₁	110	10 ⁻⁶ /K
CTE (T _g + 20°C)	α ₁	220	10 ⁻⁶ /K
Thermal Conductivity			W/mK
Thermal stability (mass loss)			%

Table 3 - Mechanical properties of cured compound (curing 1h @ 150°C)

Property	Condition	Value	Unit
Density DIN 16945	25°C		g/cm ³
Hardness DIN 53505	25°C	>85	Shore D
Glass transition temperature (DMA)		65 ± 5	°C
Shear resistance on Aluminum (Twist-o-meter)	20°C		N/mm ²
Peel resistance			N/mm
E-Modul (DMTA)		170	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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