



Polytec EC 101

Polytec EC 101 is a 100% solid, two component, electrically conductive epoxy system. The adhesive is certified to USP Class VI Biocompatibility Standards.

Typical Properties

Number of Components	2
Mixing Ratio by Weight	
Part 'A' (resin)	1
Part 'B' (hardener)	1
Pot Life at room temperature	2 Days
Shelf Life at room temperature	12 Months
Viscosity (84 U/min @ 23°C)	12000 mPa s
Consistency	Soft, creamy paste
Specific Gravity Part 'A' (resin)	2,17 g/cm ³
Specific Gravity Part 'B' (hardener)	3,34 g/cm ³
Specific Gravity (mixture)	2,75 g/cm ³
Max. Particle Size	≤30 µm
Color	Silver

Polytec EC 101 is a standard two component, silver filled, electrically conductive epoxy for high volume chip and substrate bonding in micro-electronic, medical, hybrids, optoelectronic, LED and photovoltaic applications on ITO, TCO, metals, glass, Si, ceramic and most plastics. It can be cured below 100°C (with a VR of 1-2 x 10⁻³ Ω-cm). The special chemistry of this epoxy also allows rapid cure cycles at higher temperatures. USP Class VI certified.

Features

- Reliable and easy to use
- Fast curing
- Unique handling characteristics
- Long Pot Life
- High temperature stability
- pH-value 8,5
- Certified to USP Class VI Biocompatibility Standards

Minimum Bond Line Cure Schedule

95 °C	60 Minutes
120°C	15 Minutes
150°C	10 Minutes
180°C	40 Seconds

Thermal Properties

Glass Transition Temperature (Tg)	>80°C
Max. Operating Temperature	
Continuous	-55°C / 200°C
Intermittent	-55°C / 300°C
Degradation Temperature	400°C
Coefficient of Thermal Expansion	
Below Tg/ Above Tg	40 / 114 [x10 ⁻⁶ /K]
Thermal Conductivity	1,3 W/m ² K

Electrical Properties

Volume Resistivity	1 - 4 x 10 ⁻⁴ ohm-cm
Specific Electrical Conductance	3,15 mS/m

Mechanical Properties

Shore- Hardness	D85
Die Shear Strength	≥50 N/mm ²

Processing:

- Syringe Dispensing
- Screen Printing
- Jet-Dispensing
- Fast and easy circuit repairs by hand

Available Pack Sizes:

- See price list
- Customized Packaging
- Also available as pre-mixed -frozen version

Polytec EC 101-frozen

For more information, see:

- MSDS of Polytec EC 101
- Application notes
- Catalogue

Please note:

The above listed information are typical data based on tests and are believed to be accurate. Polytec PT makes no warranties (expressed or implied) as to their accuracy. The above listed data do not constitute specifications. The processing (in particular the cure conditions) of the material, the process control and the variety of different applications at various customers are not under Polytec PT's control. Therefore Polytec PT will not be liable for concrete results in any specific application or in any connection with the use of this product. In particular the cure conditions do have a major effect on the properties of the cured material. Therefore it is highly recommended to keep the cure schedule – once established - under tight control. With the release of this data sheet all former data sheets will be null and void.

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