

Polytec TC 420

Polytec TC 420 is a 100% solid, two component, thermally conductive epoxy.

Typical Properties

Number of components	2
Mixing ratio by weight	
Part 'A' (resin)	9
Part 'B' (hardener)	1
Pot Life at room temperature	24 Hours
Shelf Life at room temperature	12 Months
Viscosity (84 U/min @ 23 °C)	22000 mPa s
Consistency	Soft paste
Specific Gravity (mixture)	2,12 g/cm ³
Specific Gravity Part 'A' (resin)	2,46 g/cm ³
Specific Gravity Part 'B' (hardener)	0,95 g/cm ³
Filler	Al ₂ O ₃
Max. Particle size	<50 µm
Color (before / after curing)	Off-white/ brown

Polytec TC 420 is a thermally conductive, electrically insulating adhesive and potting system.

It was designed for a wide range of thermal management applications in the semiconductor, hybrids, optics, optoelectronics, aerospace and electronics industry.

Polytec TC 420 is also available as low viscosity version Polytec TC 420-LV and as single component, pre-mixed -frozen version Polytec TC 420-frozen.

Typical Applications:

- Heat sinking and heat dissipation
- Thermally conductive encapsulant
- Sealing of SMD-devices
- Glob Top

Minimum Bond Line Cure Schedule

100 °C	30 Minutes
120 °C	15 Minutes
150 °C	5 Minutes

Features:

- Good adhesion on Au, Cu, Al, FR4 and most plastics
- Color change upon cure

Thermal Properties

Glass Transition Temperature (T _g)	50 °C
Continuous Operating Temperature	-55 °C / 200 °C
Degradation Temperature	350 °C
Coefficient of Thermal Expansion	
Below T _g	22 [x10 ⁻⁶ /K]
Above T _g	114 [x10 ⁻⁶ /K]
Thermal Conductivity	1,00 W/m °K

Processing:

- Dispensing
- Screen printing and stencil printing
- Manual application

Available Pack Sizes:

- See price list / Customized Packaging
- Also available as single component, pre-mixed-frozen Version **Polytec TC 420-frozen**

Mechanical Properties

Shore- Hardness	D85
Die Shear Strength	≥30 N/mm ²

For more information, see:

- MSDS of Polytec TC 420
- 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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