Polytec EC 201-2

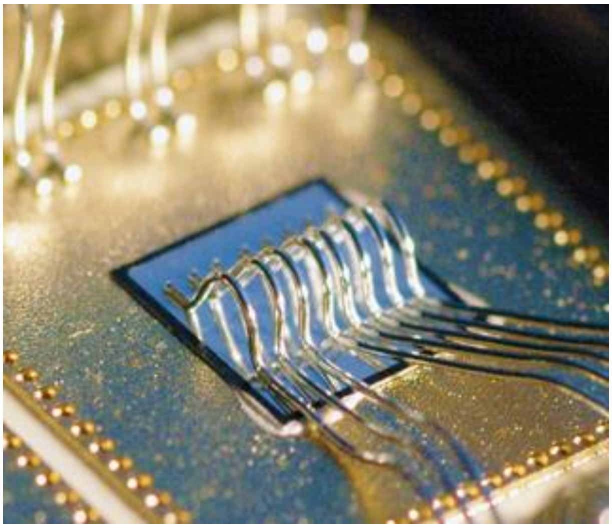
Polytec PT

Properties

Polytec EC 201-2 is a standard two-component, solvent-free, heat curing and highly flexible epoxy resin with excellent electrical and thermal conductivity.

Polytec EC 201-2 is designed for flexible circuitry and stress-free substrate bonding in photovoltaic, optoelectronic, medical, hybrid and microelectronic applications.

The material can be applied by dispensing or manually.



Processing

- For two-component products the components A and B should be mixed carefully within the specified mixing ratio.
- For filled products both components should be homogenized carefully prior mixing, in order to prevent a possible settling of the filler.
- Processing should be carried out rapidly after mixing the components; as an indication the pot life can be used.
- Surfaces should be clean, thus free of dirt, grease, oil, dust or process chemicals.
- One-component products can be applied directly and are not subject to a pot life (except pre-mixed/frozen products).
- Please take notice of respective minimum curing temperature and time.
- For Safety information please refer to the respective Material Safety Data Sheet.

Polytec EC 201-2

Electrically Conductive Adhesive

Technical Data

Version 2/2023

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Properties in uncured state	Method	Unit	Technical Data
Chemical basis	-	-	Epoxy
No. of components	-	-	2
Mixing ratio (weight)	-	-	100:70
Mixing ratio (volume)	-	-	-
Pot life at 23°C	TM 702	min	60
Storage Stability at 23°C	TM 701	months	12
Consistency	TM 101	-	Creamy Paste
Density Mix	TM 201.2	g/cm³	2.90
Density A-Part	TM 201.2	g/cm³	2.57
Density B-Part	TM 201.2	g/cm³	3.68
Type of filler	-	-	Silver
Max. particle size	-	µm	<40
Viscosity Mix 84 s^{-1} at 23°C	TM 202.1	mPa·s	7 500
Viscosity A-Part 84 s^{-1} at 23°C	TM 202.1	mPa·s	8 800
Viscosity B-Part 84 s^{-1} at 23°C	TM 202.1	mPa·s	5 800

Properties in cured* state	Method	Unit	Technical Data
Color	TM 101	-	Silver
Hardness (Shore D)	DIN EN ISO 868	-	55
Temperature resistance continuous	TM 302	°C	-55 / +170
Temperature resistance short term	TM 302	°C	-55 / +270
Degradation Temperature	TM 302	°C	+320
Glass Transition Temperature (T_g)	TM 501	°C	<23
Coefficient of thermal expansion ($<T_g$)	ISO 11359-2	ppm	-
Coefficient of thermal expansion ($>T_g$)	ISO 11359-2	ppm	-
Thermal conductivity		W/m·K	1.5
Specific volume resistivity	DIN EN ISO 3915	Ω·cm	$2 – 5 \cdot 10^{-4}$
Electrical conductivity	DIN EN ISO 3915	S/m	-
Elasticity modulus	TM 605	N/mm²	-
Tensile Strength	TM 605	N/mm²	12.2
Lap shear strength (Al/Al)	TM 604	N/mm²	-
Elongation at break	TM 605	%	7.6
Water absorption 24 h, 23°C	TM 301	%	-

*****The above data has been determined with samples cured at 150°C/15min. Please notice, by varying the curing temperature these properties can be influenced to some extend.

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Curing*	Method	Unit	Technical Data
Minimum curing temperature		°C	95
Curing time at 80°C		min	-
Curing time at 100°C		min	25
Curing time at 120°C		min	15
Curing time at 150°C		min	10
Curing time at 180°C		s	-

*****Curing temperatures refer to the temperature in the respective bond line**.** When choosing the respective curing conditions, the time needed to heat the substrate has to be considered. Depending on the type of heat source (convection oven, hot stamp, heating plate) the heat input may vary.

Standard pack size:

30 g, 250 g, 500 g

Customized Packaging

Please note:

The information listed above is typical data based on tests and is believed to be accurate. Polytec PT makes no warranties (expressed or implied) as to their accuracy. The data listed above does not constitute specifications. The processing (particularly the curing 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. The curing conditions have a major effect on the properties of the cured material. Therefore, it is highly recommended to keep the curing schedule – once established - under tight control. With the release of this data sheet all former data sheets will be null and void.

Subject to alteration.

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