Technical Datasheet
Elecolit® 6616

Product Description

Panacol Elecolit® adhesives are solvent free single or two-component adhesives. They are mostly based on epoxy resin and can be cured at room temperature or by exposure of heat. Elecolit® adhesives are electrically and / or thermally conductive adhesives which are designed for potting, bonding or contacting of conductors.

Elecolit® 6616 is a high-strength, two-component thermal conductive adhesive based on epoxy resin. Elecolit® 6616 shows an excellent combination of shear and peel strength. Elecolit® 6616 is exceptionally vibration and shock resistant. Even at very low temperatures, Elecolit® 6616 maintains its toughness. Elecolit® 6616 is a high-performance adhesive that has successfully passed 500 temperature changes -50 ° C / + 150 ° C.

Suitability on various substrates

FR4	✓	Al	✓	glass	✓	steel	✓

✓ excellent   o suitable   * pretreatment necessary/recommended

Curing Properties

This product is a two-component adhesive. The adhesive can be cured at room temperature or thermally with the addition of heat after mixing the two components in the ratio indicated. Possible curing temperatures are listed in the table below.

Thermal curing	
Time at 25°C	24 h
Time at 80°C	2 h

The adhesive can be applied after mixing the components within the pot life. To determine the pot life of the time of the double increase in viscosity after mixing of the two components is used.

Curing	
Pot life	70 min
Mixing ratio	1:1

The curing times given are guidelines. They refer to the curing of 2 g of adhesive. The heating up of the joining members are not taken into account.

The final strength of the adhesive is reached at the earliest after 24 h.

Technical Data

Resin	epoxy
Appearance	black
Filler	aluminium oxide
Filler – weight [%]	40

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Uncured material

Viscosity mix [mPas]	paste-like
Dichte [g/cm³] PE-Norm 004	1,7

Cured material

Hardness shore D PE-Norm 006	81,0
Temperature resistance [°C] PE-Norm 065	-50 - 150
Shrinkage [%] PE-Norm 031	1,0

Glass transition temperature DSC [°C] PE-Norm 009	85,0
Coefficient of linear expansion [ppm/K] below Tg PE-Norm 017	77,0

Thermal conductivity [W/m*K] PE-Norm 062	1,0
Dielectric constant [10kHz]	5,3
Volume resistivity [Ohm*cm] PE-Norm 040	3,00E+14

Lap shear strength (steel/steel) [MPa] PE-Norm 013	19,3
Lap shear strength (Al/Al) [MPa] PE-Norm 013	11,3

Transport/Storage/Shelf Life

Trading unit	Transport	Storage	Shelf-life*
Other packages	0°C - 10°C	0°C - 10°C	at delivery min. 6 months max. 12 months

*****Store in original, unopened containers!**

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Instructions for Use

Surface preparation

The surfaces to be bonded should be free of dust, oil, grease or other dirt in order to obtain an optimal and reproducible bond.

For cleaning we recommend the cleaner IP® Panacol. Substrates with low surface energy (e.g. polyethylene, polypropylene) must be pretreated in order to achieve sufficient adhesion.

Application

Our products are supplied ready to use. Depending on packaging they can be applied by hand directly from the container or semi or fully automatically. With automated application from the cartridge the adhesive is conveyed by a compressed air-operated displacement plunger via a valve in the needle. When metering low viscosity materials from bottles the adhesive is transported by a diaphragm valve. If help is required, please contact our application engineering department.

Adhesive and substrate may not be cold and must be warmed up to room temperature prior to processing.

For safety information refer to our safety data sheet.

Note

The product is free of heavy metals, PFOS and Phthalates and is conform to the EU-Directive 2011/65/EU "RoHS II" .

Our data sheets have been compiled to the best of our knowledge. The enclosed information describes characteristic properties, with no declaration of commitment. We recommend trials in order to confirm that our products satisfy the particular application requirements. For any additional technical support, please contact our application engineering department. For warranty claims, please refer to our standard terms and conditions.

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