

Technical Datasheet

Elecolit[®] 6603



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[®] 6603 is a thermal conductive, slightly flexible adhesive with very good metal adhesion, which can also be used as a potting compound.

Elecolit[®] 6603 is a one-component, has a good flow behavior and can be processed with a dispenser, in screen printing, with a spreading knife or a spatula.

Curing Properties

The product is a one-component adhesive and cures under exposure to heat. Possible curing temperatures are listed in the table below.

Thermal curing	
Time at 80°C (176°F)	15 h
Time at 100°C (212°F)	60 min
Time at 130°C (266°F)	30 min
Time at 150°C (302°F)	20 min

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.

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Resin	epoxy
Appearance	grey
Filler	aluminium oxide
Filler – weight [%]	50
Particle size D95 [µm]	40

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Uncured material

Viscosity [mPas] [cP] (Brookfield LVT, 25°C, Sp 4, 3rpm) <i>PE-Norm 001</i>	95 000 - 115 000
Density [g/cm ³] <i>PE-Norm 004</i>	1,75
Flash point [°C] <i>PE-Norm 050</i>	>93 (200°F)

Cured material

Hardness shore D <i>PE-Norm 006</i>	78 - 88
Temperature resistance [°C]	-40 - 200 (-40-392°F)
Shrinkage [%] <i>PE-Norm 031</i>	0,9
Water absorption [mass %] <i>PE-Norm 016</i>	0,3

Glass transition temperature DSC [°C] <i>PE-Norm 009</i>	83 - 93 (182-199°F)
Coefficient of linear expansion [ppm/K] below T _g <i>PE-Norm 017</i>	48,0

Thermal conductivity [W/m*K] <i>PE-Norm 062</i>	1,3
Dielectric constant [10kHz]	4,0
Dielectric strength [kV/mm]	18,1
Volume resistivity [Ohm*cm] <i>PE-Norm 040</i>	2,00E+15

Lap shear strength (Al/Al) [MPa] <i>PE-Norm 013</i>	15 (2 176 psi)
Lap shear strength (steel/steel) [MPa] <i>PE-Norm 013</i>	20 (2 900 psi)

Transport/Storage/Shelf Life

Trading unit	Transport	Storage	Shelf-life*
Cartridge	0°C - 10°C (32-50°F)	0°C - 10°C (32-50°F)	at delivery min. 3 months max. 6 months
Other packages			

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

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.

Disclaimer

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

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