

# Technical Datasheet

## Elecolit<sup>®</sup> 3063



### Product Description

Panacol Elecolit<sup>®</sup> 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<sup>®</sup> adhesives are electrically and / or thermally conductive adhesives which are designed for potting, bonding or contacting of conductors.

Elecolit<sup>®</sup> 3063 is a UV and light-curing, one component anisotropic conductive adhesive with good adhesion to PET, Kapton, Mylar and other substrates for the production of flexible circuits. In thin layers, Elecolit<sup>®</sup> 3063 is transparent with a slightly brownish color. Elecolit<sup>®</sup> 3063 is usually applied with pressure / time dosing devices. During the curing process, the pressure (1.2 - 1.7 N / mm<sup>2</sup>) must be applied using a glass punch.

### Curing Properties

UV-A	VIS	Thermal curing	Activator curing
✓	✓	-	-

✓suitable      - not suitable

The product cures within seconds with radiation in the UV-A - (320 nm - 390 nm) and visible range (405 nm). For rapid and high quality crosslinking we recommend the UV devices manufactured by Dr. Hoenle AG, which complement our adhesive technology.

UV-curing (Hoenle Discharge lamp, 320-450nm)		
Intensity [mW/cm <sup>2</sup> ]	Layer thickness [mm]	Time [sec]
70	0,5	30

VIS-curing (Hoenle LED Spot 100, 405nm)		
Intensity [mW/cm <sup>2</sup> ]	Layer thickness [mm]	Time [sec]
100	0,5	10

To obtain full cure at least one substrate must be transparent to the recommended wavelength. The curing speed will depend on the intensity of light, light source, the exposure time, and the light transmittance of the substrate. Increased mechanical properties are achieved after 12 hours.

### Technical Data

Resin	acrylate
Appearance	transparent
Filler	gold coated particles
Filler – weight [%]	3
Particle size D95 [µm]	10

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### Uncured material

Viscosity [mPas] (Brookfield LVT, 25°C, Sp 4, 3rpm) <i>PE-Norm 001</i>	150 000 - 190 000
Density [g/cm <sup>3</sup> ] <i>PE-Norm 004</i>	1,1
Flash point [°C] <i>PE-Norm 050</i>	>93

### Cured material

Hardness shore A <i>PE-Norm 006</i>	60 - 70
Temperature resistance [°C]	-50 - 150
Shrinkage [%] <i>PE-Norm 031</i>	<4
Water absorption [mass %] <i>PE-Norm 016</i>	<2

Glass transition temperature DSC [°C] <i>PE-Norm 009</i>	-45
Coefficient of thermal expansion [ppm/K] below T <sub>g</sub> <i>PE-Norm 017</i>	154
Coefficient of thermal expansion [ppm/K] above T <sub>g</sub> <i>PE-Norm 017</i>	431

Young's modulus E [MPa] <i>PE-Norm 056</i>	1
Lap shear strength (glass/glass) [MPa] <i>PE-Norm 013</i>	7
Lap shear strength (glass/Al) [MPa] <i>PE-Norm 013</i>	3
Lap shear strength (glass/steel) [MPa] <i>PE-Norm 013</i>	3
Lap shear strength (PC/PC) [MPa] <i>PE-Norm 013</i>	2
Lap shear strength (PC/PMMA) [MPa] <i>PE-Norm 013</i>	3
Lap shear strength (PC/FR4) [MPa] <i>PE-Norm 013</i>	2

### Transport/Storage/Shelf Life

Trading unit	Transport	Storage	Shelf-life*
Cartridge	at room temperature	0°C - 10°C	at delivery min. 3 months max. 6 months
Other packages	max. 25°C		

**\*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<sup>®</sup> 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 2017/2102/EU "RoHS III".

**THE VALUES NOTED IN THIS TECHNICAL DATA SHEET ARE TYPICAL PROPERTIES AND ARE NOT MEANT TO BE USED AS PRODUCT SPECIFICATIONS.**

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The user should adopt such precautions and use guidelines as may be advisable for the protection of property and persons against any hazards that may be involved in this product's handling or use. Panacol specifically disclaims any liability for consequential or incidental damages of any kind arising from the handling or use of this product.

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