

Elecolit® EI 3655 silver filled electrically conductive chip bonding adhesive has been developed for the requirements in the semiconductor industry, for microelectronic applications and LED die attach.

The usage of high density fillers and special particle size control allows to achieve highest silver loading without any solvents. The material is able to be dispensed through small needle diameters or by jet dispenser without clogging.

Elecolit® EI 3655 has low bleeding tendency, contains no outgassing substances and is a high purity adhesive (ionic content of Na+; K+ and Cl- below 10ppm).

The product cures rapidly at 180 °C.

After extended storage periods, the product must be homogenized.

**Shelf life:** 6 months at 5 °C

## Technische Daten :

Color	silver
Resin	epoxy
Filler	approx. 87% silver

## UNCURED PROPERTIES

Viscosity(Bohlin CVO / 25 °C) [mPa·s]	PE-Norm P029	15000 to 45000
Flash point [°C]	PE-Norm P050	> 100
Density [g/cm³]	PE-Norm P003	approx. 5.6
Thixotropy Index (Scherrate 30 1/s)	PE-Norm P061	3.3

## Curing

60	minutes at	180	°C	0.00003 Ohm x cm
30	minutes at	150	°C	

## CURED PROPERTIES

Temperature Resistance [°C]	PE-Norm P030	-40 to 180
Hardness [Shore D]	PE-Norm P052	75 to 85
Volume resistivity [Ohm x cm]	ASTM-D-257-93	0.0003
Water Absorption [mass-%]	PE-Norm P053	< 0.17
Tg [°C] (DSC)	PE-Norm P009	140 to 150
CTE [ppm/K]	PE-Norm P017	52
Thermal conductivity [W/m·K]	ASTM 1530	8.5

Our data sheets have been compiled to the best of our knowledge. The information included in our data sheets is exclusive information for the intended user and describes characteristics, with no declaration of commitment. We recommend trials in order to confirm that our products satisfy the particular application requirements. For an additional technical consultation, please contact our RD department. In general, for guarantee claims, please refer to our standard terms and conditions.

**Adhesives  
and more...**

### Mechanical Data

Die* Shear Strength (bare Cu) [N/Die]	[PE-Norm P057]	approx. 140
Die* Shear Strength (AgPd/CuNiAu) [N/Die]	[PE-Norm P057]	approx. 260
Lap Shear Strength (Ag/Cu) [MPa]	[PE-Norm P013]	approx. 25
Lap Shear Strength (Si/Cu) [MPa]	[PE-Norm P013]	approx. 23,5
Lap Shear Strength (AgPd/Cu) [MPa]	[PE-Norm P013]	approx. 24

\* Si die 3x3mm (120x120 mil)

### Instructions for Use

#### Surface Preparation

The surfaces to be bonded should be free of dust, oil, fat or any other dirt in order to optimise reproducible results. Lightly soiled surfaces can be cleaned with cleaner IP to create a suitable working surface.

#### Application

Our products are delivered ready for use. As soon as you receive them, you can dispense or use them for screen printing processes. You should store the products at 5° C for longer shelf life time.

Before using acclimate the adhesive up to room temperature. Liquid Elecolit products have to be homogenised well before application. Paste-like products can be used directly.

1-C Products have no mixing ration and pot life time.

#### Curing

For curing heat must be applied. The polyaddition starts at temperature over 100 °C. Higher temperature will reduce the curing time. For detailed curing information, please look into the technical data sheet. Higher curing temperature will lead to better electrical conductivity and less volume resistivity.

If help is required, please contact our engineering department.

Please read the corresponding **Safety Data Sheet** for this product.