

# Technical Datasheet

## Elecolit® 3064



### Product Description

Modified acrylate | 1 part | solvent-free | UV / Visible light curing | anisotropically conductive

- ▶ Bonding of flexible conductors
- ▶ LCD display contacting
- ▶ High flexibility
- ▶ Good adhesion to PET, Kapton and Mylar

### Curing Properties

During the curing process, the pressure (1.2 - 1.7 N / mm<sup>2</sup>) must be applied with a glass stamp. For sufficient contact, an adhesive gap thickness of approx. 8 µm should be aimed for.

| UV-A | LED 365nm | LED 405nm | Secondary heat cure |
|------|-----------|-----------|---------------------|
| ✓    | ✓         | ✓         | -                   |

✓ geeignet    - nicht geeignet

#### UV-curing (Hoenle Discharge lamp, 320-390nm)

| Intensity [mW/cm <sup>2</sup> ]* | Layer thickness [mm] | Time [s] |
|----------------------------------|----------------------|----------|
| 70                               | 0.5                  | 30       |

\*measured by Hoenle UV-Meter 3.0 / UV-A F0

#### LED-curing (Hoenle LED Spot 100, 365nm)

| Intensity [mW/cm <sup>2</sup> ]* | Layer thickness [mm] | Time [s] |
|----------------------------------|----------------------|----------|
| 300                              | 0.01                 | 3        |

#### LED-curing (Hoenle LED Spot 100, 405nm)

| Intensity [mW/cm <sup>2</sup> ]* | Layer thickness [mm] | Time [s] |
|----------------------------------|----------------------|----------|
| 500                              | 0.01                 | 3        |

\*\*gemessen mit dem Hönle UV-Meter 3.0 / LED F2

To obtain full cure at least one substrate must be transparent to the recommended wavelength. The curing speed depends on the wavelength spectrum of the light source, the intensity of light, the distance to the light source, the component geometry and the amount of adhesive. The final strength is reached after 12 hours.

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|                      |                       |
|----------------------|-----------------------|
| Resin                | Acrylate              |
| Appearance           | Transparent, brown    |
| Filler               | Gold coated particles |
| Filler - weight [%]  | 1                     |
| Particle size Ø [µm] | 10                    |

### Uncured Material

|   |                   |
|---|-------------------|
| Viscosity [mPas] (Brookfield LVT, 25 °C, Sp. 7/5 rpm)<br><i>PE-Standard 001</i>           | 150,000 – 190,000 |
| Viscosity [mPas] (Kinexus Rheometer, 25 °C, 10s <sup>-1</sup> )<br><i>PE-Standard 064</i> | 12,000 – 30,000   |
| Thixotropic index [1/10]<br><i>PE-Standard 064</i>  | 5 – 7             |
| Density [g/cm <sup>3</sup> ]<br><i>PE-Standard 004</i>                                    | 1.0 – 1.2         |

### Cured Material

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

|   |           |
|---|-----------|
| Glass transition temperature - DSC [°C]<br><i>PE-Standard 009</i>           | -50 – -40 |
| Coefficient of thermal expansion [ppm/K] below Tg<br><i>PE-Standard 017</i> | 50 – 150  |
| Coefficient of thermal expansion [ppm/K] above Tg<br><i>PE-Standard 017</i> | 280 – 450 |

|   |           |
|---|-----------|
| Young's modulus – Tensile test [MPa]<br><i>LED 405nm, 500mW/cm<sup>2</sup>, 60s</i><br><i>PE-Standard 056</i>           | <10       |
| Tensile strength [MPa]<br><i>LED 405nm, 500mW/cm<sup>2</sup>, 60s</i><br><i>PE-Standard 014</i>                         | 3 – 7     |
| Elongation at break [%]<br><i>LED 405nm, 500mW/cm<sup>2</sup>, 60s</i><br><i>PE-Standard 014</i>                        | 250 – 400 |
| Compression shear strength (glass/glass) [MPa]<br><i>LED 405nm, 500mW/cm<sup>2</sup>, 60s</i><br><i>PE-Standard 066</i> | 5 - 9     |
| Lap shear strength (glass/Al) [MPa]<br><i>LED 405nm, 500mW/cm<sup>2</sup>, 60s</i><br><i>PE-Standard 013</i>            | 2 – 5     |

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|   |       |
|---|-------|
| Lap shear strength (glass/steel) [MPa]<br><i>LED 405nm, 500mW/cm<sup>2</sup>, 60s</i><br><i>PE-Standard 013</i> | 2 – 5 |
| Lap shear strength (PC/PC) [MPa]<br><i>LED 405nm, 500mW/cm<sup>2</sup>, 60s</i><br><i>PE-Standard 013</i>       | 2 – 4 |
| Lap shear strength (PC/PMMA) [MPa]<br><i>LED 405nm, 500mW/cm<sup>2</sup>, 60s</i><br><i>PE-Standard 013</i>     | 2 – 5 |
| Lap shear strength (PC/FR4) [MPa]<br><i>LED 405nm, 500mW/cm<sup>2</sup>, 60s</i><br><i>PE-Standard 013</i>      | 2 – 4 |

### Transport/Storage/Shelf Life

| Package type      | Transport                        | Storage    | Shelf life*                                   |
|-------------------|----------------------------------|------------|---|
| Syringe/Cartridge | At room temperature<br>max. 25°C | 0°C – 10°C | At delivery<br>min. 3 months<br>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, mold release, or other contaminants in order to obtain an optimal and reproducible bond. For cleaning we recommend the cleaner IP® from Panacol, or a solution of Isopropyl Alcohol at 90% or higher concentration. 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 the packaging, our adhesives may be dispensed by hand directly from the package, or they can be applied using dispensing systems and automation. Many commercially available valve and controller options are available to ensure accurate and consistent adhesive dispensing. For assistance with dispensing and curing questions, please contact our Applications Engineering department. Adhesive and substrate should not be cold for proper bonding. They must be allowed to warm to room temperature prior to processing. After curing, the adhesive must be allowed to cool to ambient temperature before testing the product's performance. For safety information refer to our Material Safety Data Sheet (MSDS).

#### Storage

Store uncured product in its original, closed container in a dry location. Any material removed from the original container must not be returned to the container as it could be contaminated. Panacol cannot assume responsibility for products that were improperly stored, contaminated, or repackaged into other containers.

#### Handling and Clean-up

For safe handling information, consult this product's Material Safety Data Sheet (MSDS) prior to use. Uncured material may be wiped away from surfaces with organic solvents. Do not use solvents to remove material from eyes or skin!

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### Disclaimer

The product is free of heavy metals, PFOS and Phthalates and is conform to the current EU-Directive RoHS.

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#### Contact

Panacol-Elosol GmbH  
Stierstädter Straße 4  
61449 Steinbach  
Germany  
Phone: +49 6171 6202-0  
Mail: [info@panacol.de](mailto:info@panacol.de)  
[www.panacol.com](http://www.panacol.com)

Panacol-USA, Inc.  
142 Industrial Lane  
Torrington CT 06790  
USA  
Phone: +1 860-738-7449  
Mail: [info@panacol-usa.com](mailto:info@panacol-usa.com)  
[www.panacol-usa.com](http://www.panacol-usa.com)

Panacol-Korea Co., Ltd.  
#707, Kranz Techno,  
388 Dunchon-daero  
Junwon-gu, Seongnam  
Gyeonggi-do, 13403 KOREA  
Phone: +82 31 749 1701  
Mail: [info@panacol-korea.com](mailto:info@panacol-korea.com)  
[www.panacol-korea.com](http://www.panacol-korea.com)

Eleco Panacol – EFD  
125, av Louis Roche  
Z.A. des Basses Noëls  
92238 Gennevilliers Cdx FRANCE  
Tél.: +33 (0)1 47 92 41 80  
Mail: [eleco@eleco-panacol.fr](mailto:eleco@eleco-panacol.fr)  
[www.eleco-panacol.fr](http://www.eleco-panacol.fr)