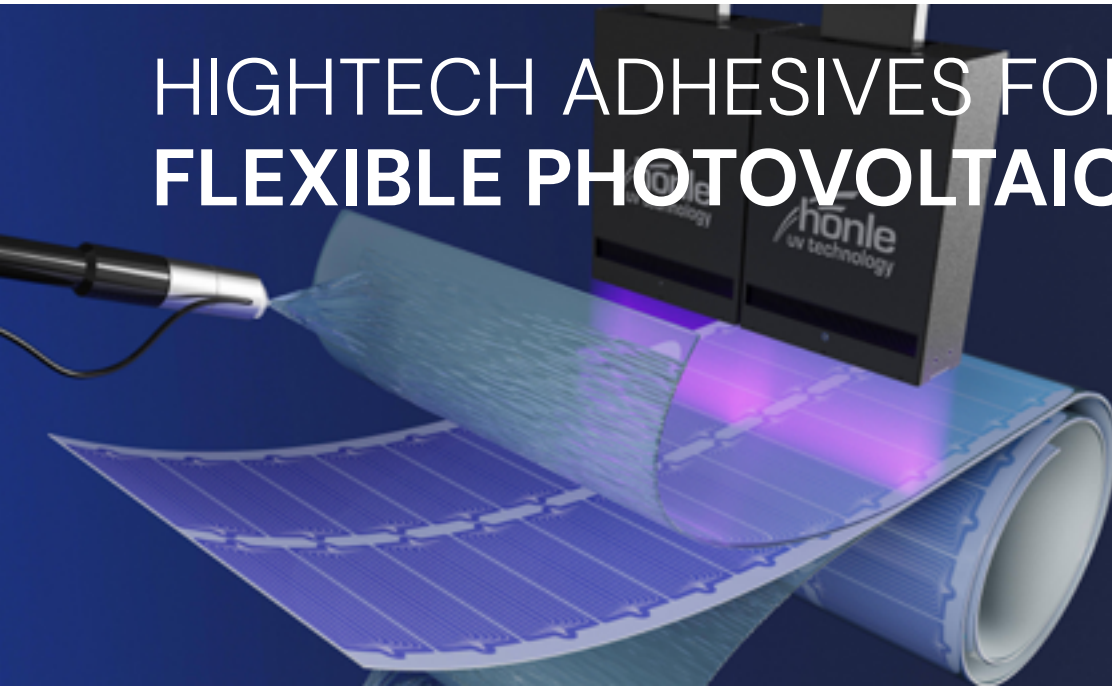


HIGHTECH ADHESIVES FOR FLEXIBLE PHOTOVOLTAICS



Hœnle developed a range of multifunctional adhesives for applications in flexible photovoltaics and electronics. For OPV applications, these adhesives provide higher resistance to environmental stresses, an improved compatibility to the PV material and a high adhesion to the substrates.

New conductive adhesives efficiently adhere and protect electrical connections for SMD components in flexible assemblies. Significant benefits can be realized when an optimal pairing is achieved with the component design, assembly, (UV) adhesive properties, and the curing process. High-throughput processes, such as the roll-to-roll process, can be operated more efficiently which reduces total cost of ownership. The adhesives requirements such as flow properties can be modified to suit the application process perfectly.

KEY ADVANTAGES

- **Environmental Resistance**
Protection against moisture, heat, and other stresses in OPV applications
- **Material Compatibility**
Excellent adhesion to PV materials and flexible substrate
- **Reliable Connections**
Conductive adhesives ensure stable bonding and protection of SMD components
- **Customizable Properties**
Adhesive flow and curing behavior can be tailored to specific application needs



LED CURABLE FOR HIGHER
PROCESS EFFICIENCY



FLEXIBLE AND COMPATIBLE
TO PV MATERIALS



ELECTRICALLY CONDUCTIVE

FLEX OPV | SYSTEM SOLUTION

FLEX OPV | ADHESIVES

| | Viscosity [mPas] (Rheometer, 25°C, 10s ⁻¹) | Curing* | Description |
|----------------------|---|----------------------|--|
| Customized Vitralit® | Adaptable | UV/VIS (+Thermal) | Flexible adhesives with high adhesion to several substrates |
| Vitralit® UD 1410 | 1,500 – 2,000 | UV/VIS/ Thermal | Flexible with approved compatibility to pv materials, low WVTR |
| Vitralit® UH 1411 | 6,000 – 7,000 | UV/VIS | Flexible with approved compatibility to pv materials, excellent adhesion to barrier foil |
| Vitralit® E-VBB 1 | 1,300 – 1,600 | UV/VIS | Elastic, high peel strength, LED-curable |
| Customized Elecolit® | Adaptable | Thermal | Flexible electrically conductive adhesive with high bond strength to several substrates |
| Elecolit® 3648 | 10,000 – 15,000 | Thermal | Flexible, electrically conductive with high bond strength to several substrates, fast curing at 100 °C |
| Structalit® 3060-1 | 7,000 – 10,000 | Thermal | Flexible, high bond strength to several substrates, fast curing |

*UV = 320 – 390 nm, VIS = 405 nm

UV CURING SYSTEMS

| | Dimension in mm | Available Wavelength in nm | Intensity in W/cm ² | Cooling |
|---------------------|---|----------------------------|--------------------------------|----------------------|
| LED Spotlights | Light emission up to Ø 20 | 365/385/405 | up to 20.000 | air-cooled |
| LED Line Emitters | Light emission width 10/20/40, length variable | 365/385/395/405/460 | up to 25.000 | air and water-cooled |
| LED Floodlights | Light emission 20x20 / 40x40 / 100x100 / 200x50 | 365/385/395/405/460 | up to 30.000 | air and water-cooled |
| LED Curing Chambers | Inner dimension 180x180 / 350x350 | 365/385/395/405/460 | up to 5.000 | air-cooled |
| LED Conveyor Belts | Belt width 110 – 520 | 365/385/395/405/460 | up to 25.000 | air and water-cooled |

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KLEBEN VERBINDET |    

Operating parameters depend on production characteristics and may differ from the foregoing information. We reserve the right to modify technical data.

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