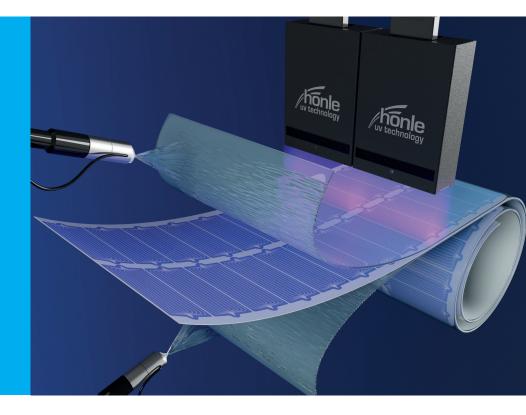




## Adhesives for Flexible OPV



## **Hightech Adhesives for Flexible Photovoltaics**

Panacol multifum for a photor For adher resist stres compand and substradhesiv protect for SMD assemblies.

Panacol developed a range of multifunctional adhesive selections 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 conductive substrates. New adhesives efficiently adhere and protect electrical connections for SMD components in flexible

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 in this context to suit the application process perfectly.

LED curable for higher process efficiency



Flexible and compatible to PV materials

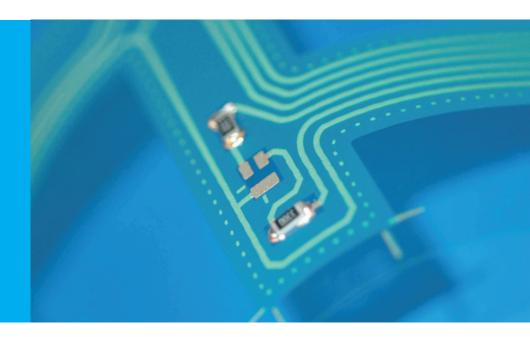








## **OPV Adhesives** for Organic and Flexible **Photovoltaics**



| Adhesive                                            | Viscosity [mPas]<br>(Rheometer, 25°C, 10s <sup>-1</sup> ) | Curing*              | Description                                                                                                              |
|-----------------------------------------------------|-----------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------|
| Customized Vitralit®                                | Adaptable                                                 | UV/VIS<br>(+Thermal) | Flexible adhesives with high adhesion to several substrates, barrier foils, high compatibility to pv materials, low WVTR |
| Vitralit® UD 1410                                   | 1,500 - 2,000                                             | UV/VIS/Thermal       | Flexible with approved compatibility to pv materials, low WVTR                                                           |
| Vitralit <sup>®</sup> 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 adhesives 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 $^{\circ}\text{C}$   |
| Structalit® 3060-1 *UV = 320 - 390 nm; VIS = 405 nm | 7,000 - 10,000                                            | Thermal              | Flexible, high bond strength to several substrates, fast curing                                                          |

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