

## Polytec DC 2307

### Description

- one-component acrylate/ methacrylate hybrid
- solvent-free
- UV/VIS curing
- thermal curing

### Product properties

- medium viscous
- adhesion to various substrates
- flexible
- impact resistant
- weather und climate resistant

### Special features

- thermal curing in shadow zones
- no stringing

### Applications

- bonding, sealing, potting
- pin sealing

### Processing information

After application, the joining of the parts should be done quickly, as some products already cure with daylight. Any contact of the adhesive with base metals, contamination with amines or reducing agents (e.g. vitamin C) should be strictly avoided, as this may lead to undesired premature curing of the product (e.g. in the metering unit).

### Surface preparation

The surfaces to be bonded should be free of dust, oil, grease or other contaminants in order to obtain an optimum and reproducible bond. For lightly soiled parts, wiping with isopropanol or ethanol is sufficient. Substrates that have a low surface energy (e.g. polyethylene, polypropylene, Teflon) must be physically pretreated (e.g. with atmospheric plasma or corona) to achieve sufficient adhesion.

## Polytec DC 2307

Dual curing acrylate/ methacrylate hybrid adhesive

## Technical Information

## Polytec DC 2307

| Properties in the uncured state | Method                      | Unit              | Technical data               |
|---------------------------------|-----------------------------|-------------------|------------------------------|
| Chemical base                   | -                           | -                 | acrylate/methacrylate hybrid |
| Color                           | -                           | -                 | slightly yellow, fluorescent |
| Number of components            | -                           | -                 | 1                            |
| Shelf life at max. 10°C         | -                           | Month             | 6                            |
| Consistency                     | -                           | -                 | medium viscous               |
| Density                         | -                           | g/cm <sup>3</sup> | app. 1.05                    |
| Viscosity rheometer, cone/plate | 400 s <sup>-1</sup> at 23°C | mPa-s             | app. 2,300                   |

| Properties in the cured state                                   | Method                            | Unit              | Technical data    |
|---|-----------------------------------|-------------------|-------------------|
| Shore-hardness  | Shore D<br>curing at 395 nm*      | -                 | 44                |
| Service temperature   | -                                 | °C                | -40 / +120        |
| Max. temperature short term                                     | -                                 | °C                | app. +280         |
| Lap shear strength<br>PC/nickel<br>PA6.6/nickel<br>FR4/aluminum | Curing at 395 nm*                 | N/mm <sup>2</sup> | 4.6<br>6.0<br>7.6 |
| Tensile strength  | Curing at 395 nm*                 | N/mm <sup>2</sup> | 7.2               |
| Elongation at break   | Curing at 395 nm*                 | %                 | 136               |
| Water absorption 24 hrs.<br>23°C<br>85°C                        | gravimetric,<br>curing at 395 nm* | %                 | 0.3<br>0.3        |

\*For some products, the through-curing is limited in 3 mm or by substrates, therefore the curing time for the determination of the measured value is adjusted individually.

## Polytec DC 2307

| Curing*   | Method | Unit               | Technical data |
|---|--------|--------------------|----------------|
| Feasible UV-wavelength range                                  | -      | nm                 | 365 - 405      |
| Optimum wavelength range for curing                           | -      | nm                 | 395 - 405      |
| Curing dose at 395 nm in 1 mm layer                           | -      | mJ/cm <sup>2</sup> | 1,500          |
| Curing time at 1,500 mW/cm <sup>2</sup> @395 nm in 1 mm layer | -      | sec                | 1              |
| Minimum curing temperature                                    | -      | °C                 | 85             |
| Thermal curing at 100°C                                       | -      | min                | 30             |

\*High-power LED lamps are recommended for curing in order to introduce the optimum dose and wavelength with the highest possible energy yield and the lowest possible temperature load on the substrate.

### Work and health protection

See safety data sheet.

### For your attention:

The above data can only be general information. The properties and performance characteristics listed are typical values and do not form part of the product specification. Due to the processing and application conditions beyond our control and the large number of different materials, we recommend that you first carry out your own tests. Therefore, no liability for concrete application results can be derived from the information and notes in this data sheet. With the publication of this edition, all previous technical data sheets become invalid.

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