



# IQ-BOND 5401 CE

## Electrically Conductive Adhesive

### One Component, Silver filled, Electrically Conductive Adhesive

#### Product Description:

IQ-BOND 5401 CE is a solvent-free, one-component, pre-mixed, thermoset epoxy based adhesive. It offers the combination of short curing cycles, combined with good electrical conductivity.

Despite its thixotropic nature, and relatively high viscosity, the rheology is ideally suited for high speed small dot dispensing. Also stamping processes can be considered with IQ-BOND 5401 CE.

IQ-BOND 5401 CE has a long work life at room temperature, of about 2 days. Storage can be done for 6 months at -20°C, or alternatively 12 months at -40°C.

IQ-BOND 5401 CE bonds very well to metals, glass, ceramics, as well as plastics. It is used for applications where elevated soldering temperatures are not preferable, and low-temperature cure is required. Typical applications include bonding micro-electronic components onto temperature sensitive substrates, such as flexible circuits. Also for those applications where solders are too rigid, the flexible nature of IQ-BOND 5401 CE makes it a suitable alternative for improved thermal cycling resistance.

IQ-BOND 5401 CE is a solvent-free, 100% solids material, and is supplied as a viscous and thixotropic paste, assuring it will not flow during application. After cure, it provides good chemical resistance.

For cleaning uncured IQ-BOND 5401 CE, the use of IQ-CLEANER 9500 is recommended, although, also other organic cleaning solvents, such as IPA and/or Aceton can be considered.

#### Product Properties:

- |                             |   |
|-----------------------------|---|
| • Appearance:               | Silver, thixotropic Paste                                   |
| • Chemistry:                | Epoxy   |
| • Mixing Ratio (by wght %): | Not Applicable , pre-mixed one-component                    |
| • Viscosity (mPa.s):        | ~ 150.000 mPa.s (Brookfield RVII – CP51 – 0,3 rpm @ 25°C)   |
| • Working Life:             | ~ 2 days  |
| • Density:                  | ~ 3,0 gr/cc   |
| • Fineness:                 | < 30 µm   |
| • Volume Resistivity:       | ~ 5 x 10 <sup>-4</sup> Ohm.cm (after cure 60 minutes 150°C) |
| • % Ash residue:            | ~ 76 +/- 1  |
| • Cure Speed *:             |   |
| ○ 15 minutes @ 120°C        | - Volume resistivity < 5 x 10 <sup>-3</sup> Ohm.cm          |
| ○ 5 minutes @ 150°C         | - Volume resistivity < 1 x 10 <sup>-3</sup> Ohm.cm          |



### Instructions For Use of IQ-BOND 5401 CE :

Prior to use, it's advised to let the adhesive IQ-BOND 5401 CE equilibrate to room temperature. Depending the size of syringes, 15 – 30 minutes is typically recommended.

It is advised to avoid too high humidity, as it may cause moisture accumulation in the adhesive, which can reduce the worklife of IQ-BOND 5401 CE.

To ensure long term performance of the assembled parts, a complete cleaning of the substrates is recommended to remove contaminations, such as surface oxides, dust, moisture, etc.

It is recommended to read thoroughly the information concerning health and safety in the Material Safety Datasheet, prior to usage.

### Storage stability:

When stored at -20°C, storage life is 6 months from date of production. In case of storage at -40°C, the shelf life is 12 months.

### Attention:

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