IQ-BOND 2242-FR-HT

Black, low T°-cure, 1-komponent, flame retardant, high-thyxotropic adhesive

Pre-Mixed, Epoxy-based Adhesive with very long potlife, meets UL94-V0

Product Description:

IQ-BOND 2242-FR-HT is a solvent-free, one-component, pre-mixed, thermoset epoxy based adhesive, developed for dispensing applications. However, the high thixotropic rheology also allows stencil and/or screen printing applications.

IQ-BOND 2242-FR-HT can be cured at temperatures as low as 80°C.

It has been designed specifically for bonding of temperature sensitive components to printed circuit boards. The chemistry has been selected and optimized for allowing cure at low temperatures (80°C), which nevertheless results in high adhesion strengths.

Its chemistry has been selected to provide good green strength, resulting in optimum pick & place performance of all common SMD components.

IQ-BOND 2242-FR-HT has been optimized to meet the cure profile of 4-5 minutes @ 105°C. For optimum curing performance, it's recommended to do the cure process in a conveyor belt oven. When curing IQ-BOND 2242-FR-HT in a convection oven, it is recommended to apply a longer curing time for optimum adhesion properties.

Unlike many other single-component adhesives, characterized by a short potlife, IQ-BOND 2242-FR-HT has a long potlife of > 1 week at room temperature.

When fully cured, IQ-BOND 2242-FR-HT is resistant to moisture, cleaning agents and dilute acids and bases. Also it exhibits very good high thermal resistance, for example typical SnPb-, as well as lead-free soldering processes.

IQ-BOND 2242-FR-HT is a solvent-free, 100% solids material and RoHS / REACH compliant.

For cleaning un-cured IQ-BOND 2242-FR-HT from stencils, screens, squeegee, or other equipment, the use of IQ-CLEANER 9500 is recommended.

IQ-BOND

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Product Properties:

- Appearance: Black Thyxotropic Paste
- Chemistry: Epoxy
- Odor: Faint
- Mix-Ratio: Not Applicable – pre-mixed single component adhesive
- Fineness: < 30 µm
- Viscosity: ~ 250.000 mPa.s (Brookfield SSA, SC-25 at 10 rpm)
- Thyxotropic Index > 4 (Brookfield SSA, SC-25 – ratio of 1 rpm / 10 rpm)
- Cure Speed:
  - 1 minutes @ 150°C
  - 4 - 5 minutes @ 105°C *
  - 60 minutes @ 80°C

For good mechanical strength, cure according above conditions is recommended, and a minimum of 80°C required. The final bond strength will depend on the residence time at the given cure temperature. Typically, a higher curing temperature, as well as a longer cure time will result in higher adhesion strength, and improved polymer crosslinking.

* To realize the cure of 4 – 5 minutes at 105°C, it is highly recommended to use a conveyor belt oven. Cure in a convection air oven at 105°C may require longer curing times, f.e. 7 - 10 minutes., depending the type of convection oven.

Storage stability:

Storage stability is 6 months from date of production, when stored at temperatures below 5°C, in closed containers. At temperatures < -20°C, storage stability is 12 months. At room temperature, IQ-BOND 2400 has a long worklife / potlife of > 1 week.