

IQ-BOND 2640-FC

Very Fast, Room Temperature Curable, , 2-Komponent, Structural, Epoxy-based Adhesive, 1:1 Mix-Ratio

Product Description:

IQ-BOND 2640-FC is a medium viscosity, fast-curable, two-component, epoxy based adhesive, for bonding electronic and/or industrial components, within only a few minutes, at room temperature.

Its chemistry has been especially selected to provide very fast cure properties, combined with good adhesion on a wide variety of substrates.

When properly cured, IQ-BOND 2640-FC provides long term reliable bonds over a large range of temperatures, up to 100°C.

IQ-BOND 2640-FC can be cured at room temperature, in about 5 - 10 minutes, depending the quantity of adhesive used. Higher adhesive quantities will accelerate the curing cycle even more, due to the exothermic nature of the adhesive, when bringing part A and part B together.

When fully cured, the IQ-BOND 2640-FC is resistant to moisture, most cleaning agents and dilute acids and bases. The epoxy-based chemistry provides good adhesion strength on a variety of substrates, such as metals, ceramics, glass and a variety of plastics.

Its chemistry has been selected to enable temperature resistance up to 100°C, depending the geometries and materials of the component to be bonded.

IQ-BOND 2640-FC is REACH and ROHS compliant.

Typical Product Properties of Uncured Material



IQ-BOND 2640-FC - part A

- Appearance: Clear / Light Yellow Paste
- Odor: Faint
- Viscosity: 10.000 – 15.000 mPa.s (Brookfield RVII – CP51 – 25°C – 2 rpm)
- Density: ~ 1,15 gr/cc

IQ-BOND 2640-FC – part B

- Appearance: Amber paste
- Odor: Faint

- Viscosity: 14.000 – 20.000 mPa.s (Brookfield RVII – CP51 – 25°C – 2 rpm)
- Density ~ 1,15 gr/cc

Typical properties of mixed IQ-BOND 2640-FC

- Mix-Ratio by weight: 100 parts A + 100 parts B
- Appearance: Yellowish Paste
- Chemistry: Epoxy
- Mixed Viscosity: ~ 15.000 mPa.s (Brookfield RVII – CP51 – 25°C – 2 rpm)
- Worklife / Potlife: 4 minutes at 25°C
- Hegmann Fineness: Unfilled
- Density: ~ 1,15 gr/cc
- Possible cure profiles:
 - 5 - 10 min @ 25°C
 - 1 - 2 min @ 50°C

For good mechanical strength, cure according above conditions is recommended. For best performance, a post-cure of 2 hours at the highest expected use temperature is recommended.

Typically, a higher curing temperature, as well as a longer cure time will result in higher adhesion strength, and improved polymer crosslinking.

Typical properties of cured IQ-BOND 2640-FC:

- Hardness :
 - After 1 hr. cure at Room Temperautre : >65 shore D
 - After 3 hrs. cure at Room Temperautre : >70 shore D
 - After 24 hrs. cure at Room Temperautre : >80 shore D
- Tensile Lap Shear Strength: > 12 MPa (Alu/Alu)

Storage stability:

IQ-BOND 2640-FC part A and part B should be stored at room temperature in conditions such that moisture is excluded, in the original containers kept tightly closed. Under these conditions the shelf life is 12 months from date of production.

If IQ-BOND 2640-FC develops a haziness or crystallizes during storage, this can be dispersed and the resin restored to its original condition by warming to 55-65°C, with stirring.

During this process of de-crystallization, be sure the container is loosely covered during the warming stage, to prevent any pressure build-up. Allow the contents to cool to room temperature before continuing.

Material removed from containers may be contaminated during use. Do not return product to the original container.

Instructions for use:

- a) Complete cleaning of the substrates should be performed to remove any contaminants, such as oxide layers, dust, moisture, salt and oils, which can cause poor adhesion and/or corrosion in the bonded / encapsulated part.
- b) Prior to using, it's recommended to re-homogenize both part A and part B.
- c) Accurately weigh resin (part A) and catalyst (part B) into a clean container in the recommended mix-ratio.
- d) Blend the components by hand, using a kneading motion, for several minutes. Scrape the bottom and sides of the container frequently, to assure a uniform mixture is prepared.
- e) If possible, power mix for an additional 2 minutes. Avoid high mixing speeds to prevent excessive air entrapment into the mixture, as well as to avoid temperature increase which may lead to reduced worklife
- f) To ensure a void-free potting, vacuum de-airing should be used to remove any entrapped air introduced during the mixing operation. It's recommended to pump-down or pull vacuum of the mixture to achieve a vacuum or absolute pressure of ~ 1-5 mBar. During this operation, the resin will rise as a foam, and air will be removed from the mixture. At the end of this process, when most of the air is removed, the mixture will subside.
- g) Continue the vacuum de-airing until most of the bubbling has ceased. This usually takes an additional 3 – 10 minutes.
- h) Pour the mixture into the cavity of the component to be encapsulated.
Gentle warming of the assembly parts reduces the viscosity. This can improve the flow of the material into small cavities.
- i) In some critical applications, further vacuum de-airing may be required after the casting process.

Attention:

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