M-Bond 610

Two-component system

Description

M-Bond 610 is a permanent, two-component epoxy-phenolic adhesive that cures in 1 hour at 150 °C (302 °F). It is chemically resistant, provides a very thin glue line and will not outgas under vacuum. Curing must begin within 4 hours of application.

Mixing Ratio, by VOLUME
1:1 (Resin: Curing Agent)

Curing Schedule
(glue line temperature)
1 hour at 150 °C (302 °F)
2.5 hours at 120 °C (248 °F)
4 hours at 100 °C (212 °F)

Operating Temperature Range
Short Term: –452° to +700°F (–269° to +370 °C)
Long Term: –452° to +500°F (–269° to +260 °C)
Transducers: to +450°F (+230 °C)

Physical Properties (as-mixed)
Pot Life = 6 weeks, at 24 °C (75 °F) or
12 weeks at +40 °F (+5 °C)

Elongation Capabilities
1% at –452 °F (–269 °C)
3% at +75 °F (+24 °C)
3% at +500 °F (+260 °C)

Clamping Pressure
10 to 70 psi (70 to 480 kN/m2)
30 to 40 psi optimum (200 to 275 kN/m2)

Cure Requirements
Recommended Postcure: 2 hours at 50° to 75°F (30° to 40°C) above maximum operating temperature or cure temperature, whichever is higher
High Precision Transducer Postcure: 2 hours at +400° to +450°F (+205° to +230°C) after wiring

Applications

M-Bond 610 is commonly used to bond multiple samples together and to adhere thinned samples to grids for TEM or FIB observation.

WARNING!

GHS02 GHS05 GHS07 GHS08 GHS09

Refer to the SDS document for additional safety information.

Instructions:

DO NOT open a resin or curing agent bottle before it has reached room temperature!

1) Using the included disposable plastic funnel, empty the contents of the bottle labeled "Curing Agent" into the bottle labeled "Adhesive." Discard the funnel when finished.

2) Use the included brush applicator cap to securely close the "Adhesive" bottle and thoroughly mix the contents by vigorously shaking it for 10 seconds.

3) Mark the bottle in the space provided on the label with the mixing date.

4) Allow the freshly mixed adhesive to stand for at least 1 hour before using.

Storage Note: Keep the containers closed when not in use, and do not store above 48 °C (120 °F). The shelf life is 9 months from date of manufacture when stored at room temperature (+75°F, +24°C) or 15 months from date of manufacture when refrigerated (+40°F, +5°C). Refrigerated storage is recommended.

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