

Technical Data Sheet

Electronic Glass Materials DL11-205 Pb-Free Sealing Glass Paste

Application

DL11-205 Sealing Glass is a Pb and Cd free, thick-film glass paste designed for sealing low thermal expansion substrates such as silicon and soda lime at reduced firing temperature.

DL11-205 is especially suited for hermetic sealing of wafer-level MEMS packaging, and other micro-mechanical devices such as vibration, YAW and accelerometer sensors.

DL11-205 Sealing Glass paste is formulated and processed to be RoHS compliant

Typical Formulation Properties

Viscosity: 90 ± 20 Pa.s

Solids Content: 88 ± 2%

Storage and Shelf Life: This product should be stored in tightly sealed containers at 10 to 25°C in a dry place away from direct sunlight. The shelf life of a factory sealed container is a minimum of 3 months from date of shipment.

Typical Fired Properties

- Thermal Expansion @ 260 °C 9-9.5 ppm
- Glass Transition Temperature 350 °C

Typical Process Parameters

Thinning: This paste are formulated at the appropriate viscosity for the intended application. Contact your Technical Service representative for the correct thinner to use should solvent replacement become necessary.

Printing: Screen print using a 250 to 325 mesh screen with 25 µm emulsion will typically yield a 20 to 30 µm dried thickness.

Leveling: 5 to 7 minutes at room temperature.

Drying: 7 to 10 minutes at 100°C to 120°C in an oven with forced air flow and exhaust.

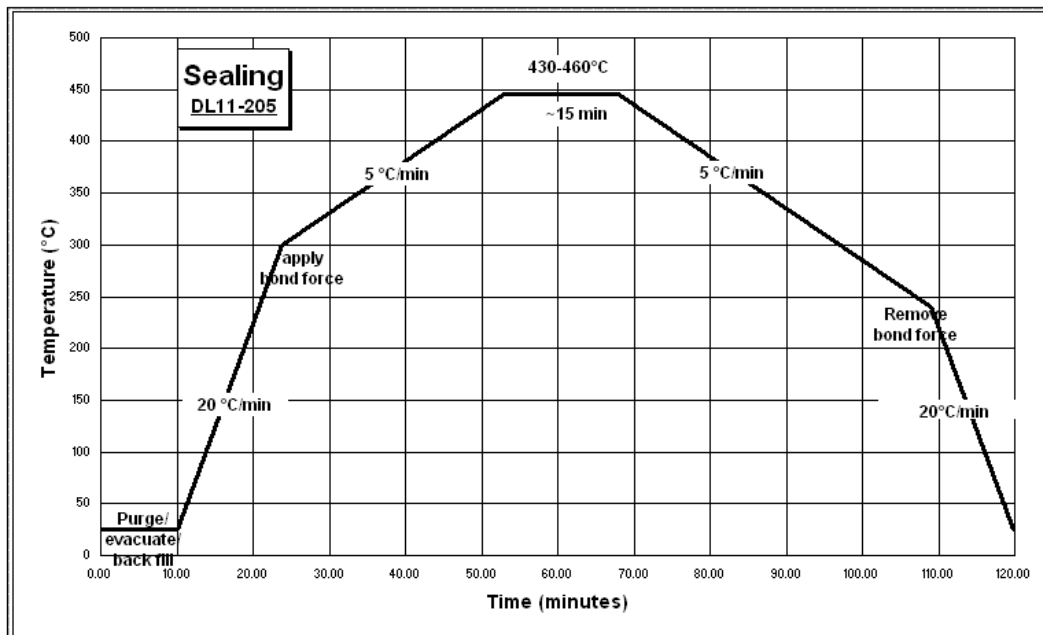
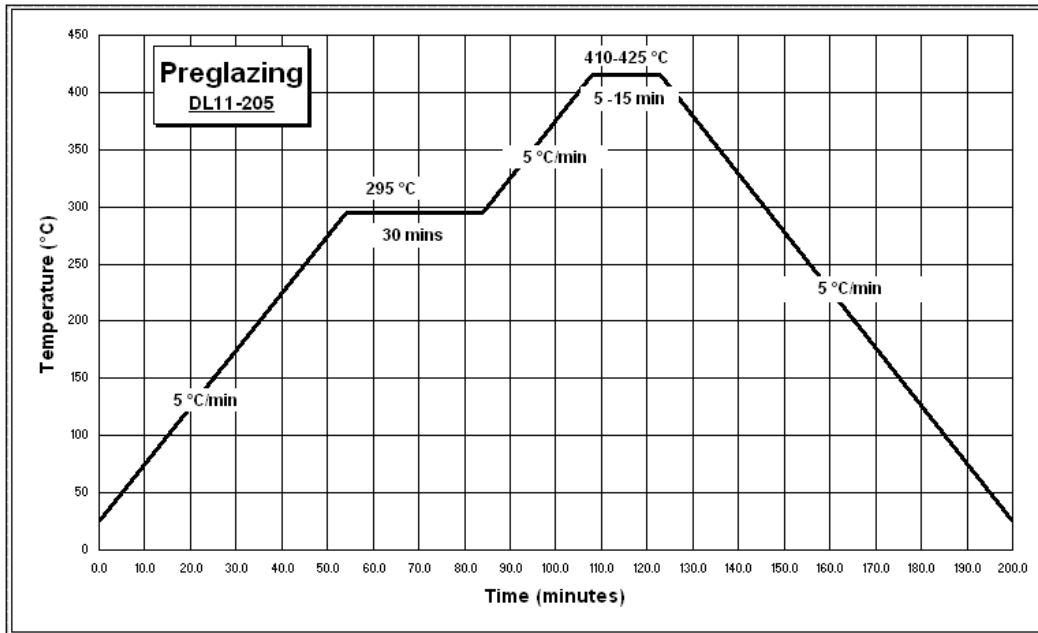
Binder Burnout and Glazing: Removal of organics and glazing (sintering) of the glass layer is typically carried out in a programmable furnace under an oxidizing atmosphere using the profile shown below

Firing: Following binder burnout and glazing, mate together the materials to be sealed and fire using the sealing profile shown below

It may be necessary to optimize the sealing profiles depending upon the size and thermal mass of the parts being sealed.

Electronic Glass Materials

DL11-201 Pb-Free Sealing Glass Paste



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