

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Dielectrics

Product Name: SG-705

Sealing Glass

Description

SG-705 is a low fire sealing glass designed to seal alumina substrates to alumina substrates. It fires out to a white translucent material. It has been specially engineered to provide dimensional stability during sealing.

Key Benefits

- Thermal expansion matched to Al₂O₃
- Low shrinkage upon firing
- Dyed paste for easy visual inspection
- Provides strong dense seal
- Cadmium free

Typical Properties

Viscosity

125 – 165 Kcps, Brookfield HBT, SC4-14 spindle at 10 rpm in 6R utility cup, at 25 °C

F.O.G

Less than 16 µm
(4th scratch)

Solids

76.0 ± 1.0 %

Coefficient of Thermal Expansion

72 – 80 x 10⁻⁷ ppm/°C

Recommended Processing Guidelines

Recommended Process for Optimum Joining

For hermetic joining of two ceramic pieces, the following sequence of processing steps is recommended:

1. Print/Dry/Fire material on side A.
2. Print/Dry/Fire material on side B.
3. Make contact between side A and side B.
4. Fire at recommended sealing profile.

Printing

165 – 200 mesh
0.5 mil emulsion

Drying

150 °C for 10 minutes

Thickness

Dried: 36 – 40 µm

Firing

620 °C peak temperature
4 – 5 minutes at peak, 6 – 7 minutes > 600 °C

Thinner

RV-507

Warranty

Material guaranteed to meet specifications for 6 months from date of shipment.

Storage

Store in a dry location at 5 – 25 °C.

DO NOT REFRIGERATE.

Allow paste to come to room temperature prior to opening. Spatulate well before using, as settling may occur during storage.

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