Heraeus

Dielectrics

SG-705

Sealing Glass

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

- **Key Benefits:**
  - TCE matched to Al_2O_3
  - 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 @ 10rpm in 6R utility cup, @ 25°C

F.O.G:
Less than 16 microns
(4th scratch)

Solids:
76.0 ± 1.0%

Coefficent of Themal Expansion:
72 - 80 × 10^{-7} ppm/°C

- **Recommended Processing Guidelines:**

Recommended Process for Optimum Joining:
For hermetic joining of two ceramic pieces, we recommend the following sequence of processing steps:

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:
Dry at 150°C for 10 minutes

Thickness:
Dried: 36-40 microns

Firing:
620°C peak temperature
4-5 minutes at peak, 6-7 minutes > 600°C

Thinner:
RV-507 (Texanol ®)

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

Storage:
Store in a dry location at 5°C-25°C.
DO NOT REFRIGERATE.
Allow paste to come to room temperature prior to opening
Spatulate well before using

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