

Dielectrics

SG-683K

Sealing Glass

Description:

SG-683K is a low fire sealing glass designed to seal alumina to alumina. It fires out to a clear transparent material. It has been specially formulated to provide a dense, pore free hermetic seal.

● **Key Benefits:**

- TCE matched to Al₂O₃
- Dyed paste for easy visual inspection
- Provides strong pore free seal

● **Typical Properties:**

Viscosity:

100-180 Kcps, Brookfield, SC4-14 spindle and 6R utility cup @ 10 rpm, 25°C

F.O.G.:

<16 microns (4th scratch)

Solids:

75 ± 2.0%

● **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 stainless steel screen
0.5 mil emulsion

Drying:

Dry at 150°C for 10 minutes.

Firing:

600-650°C peak temperature
5-10 minutes at peak

Thickness:

Dried: 40 microns
Fired: 25 microns
Wet: 60 microns

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

YY1010.10

Dielectrics

SG-683K

Sealing Glass

The descriptions and engineering data shown here have been compiled by Heraeus using commonly-accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use, or any patent infringement resulting from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for a particular application.

Americas
Heraeus Materials Technology LLC
Thick Film Materials Division
24 Union Hill Road
West Conshohocken, PA 19428
USA
Phone: +1 (610) 825-6050
E-Mail: techservice.hcd@heraeus.com
Internet: www.thickfilm.net

Europe
W.C. Heraeus GmbH
Thick Film Materials Division
Heraeusstr. 12-14
63450 Hanau
Germany
Phone: +49 (6181) 35-5466
E-mail: th-info@heraeus.com
Internet: www.heraeus-thickfilm.com

Asia
Heraeus Materials Technology
Shanghai Ltd.
No. 1 Guang Zhong Road
Zhuanqiao Town, Minhang District
Shanghai 201108
People's Republic of China
Phone: + 86 (21) 3357-5688
E-Mail: th.hmts@heraeus.com
Internet: www.heraeus-thickfilm.com