

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Dielectrics

Product Name: SG-683K



Sealing Glass

Description

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

Key Benefits

- REACH¹ and ROHS² compliant
- Thermal expansion 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 at 10 rpm, 25 °C

Solids

75.0 ± 2.0 %

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 stainless steel screen
0.5 mil emulsion

Drying

150 °C for 10 minutes

Firing

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

Thickness (Target)

Wet:	60 µm
Dried:	40 µm
Fired:	25 µm

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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Legend:

1) REACH compliant according to the latest ** Annex XIV to Regulation (EC) of the European Parliament and of the council on the Registration, Evaluation, Authorisation and Restriction of Chemicals ("REACH") by European Chemicals Agency and its subsequent amendments; the material does not contain any substance listed in Annex XIV.

2) RoHS compliant according to the latest ** Directives (European Union) of Restriction of Hazardous Substances ("RoHS") and its subsequent amendments (including the exceptions related to Pb)

* See the data sheet issue date (DD/MM/YY) as reference of validity of latest edition which is available on request

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