

Dielectrics

SD 1019



Lead Free and Acid Resistant Overglaze / DPIS*

* Development Product Information Sheet

Description

SD 1019 is a lead free screen printable 850 °C firing overglaze. It fires to an extremely dense glaze. Its hermetic fired film layer is highly resistant vs acid, especially to protect heating tracks on dielectric on steel.

Key benefits

- Extremely resistant vs citric acid and salt fog/spray
- Excellent compatibility with heating tracks and its termination on dielectric SD 1010
- Free of lead, nickel and cadmium
- Free of phthalate
- REACH³ and RoHS⁴ compliant

Processing

1. Spatulate well prior to processing. When stored in a refrigerator allow paste to come to room temperature prior to opening, to avoid condensation.
2. Print through a 200 - 325 mesh stainless steel screen. A print-dry-fire sequence is advised for each layer, if higher fired film thickness is required.
3. Let the print settle at room temperature for 10 minutes.
4. Dry at 150 °C for 10 minutes.
5. Fire at 850 °C (peak) for 10 - 12 minutes, and with a total firing cycle time of 30 - 60 minutes.

Thinner

HVS 507

Typical Properties (Paste)

Form:	Thixotropic paste
Viscosity:	20 - 40 Pas (23 °C, D = 33 s ⁻¹)
Solids:	70.0 % ± 1.0 %
Shelf Life:	6 months from date of shipment with correct storage (in a dry, cool (5 - 25 °C) and dark place with container tightly shut)

Typical Properties (Fired)¹

Fired Film Thickness ² :	18 - 22 µm (double wet printing)
Color:	Green transparent

Compatibility

Dielectrics:	SD 1010
Heating Tracks:	SR 21-350-025 SR 21-350-100
Termination: (of Heating Tracks)	SC 1001 (AgPt)

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- 1 Typical properties based on laboratory test methods. For optimum results all materials should be fired in a profiled furnace supplied with dried, hydrocarbon and other contaminant free air (PP-1).
- 2 Measured on alumina after printing with a 200 mesh steel screen; thickness of screen and emulsion combined was c. 60 µm, and the resultant printed track was 500 µm wide.
- 3 REACH compliant according to the Commission Regulation (EU) No 143/2011 of 17 February 2011 amending Annex XIV to Regulation (EC) No 1907/2006 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; we define a material as REACH compliant, as long as substances used are not recorded in the Annex XIV.
- 4 RoHS compliant according to the Directives (European Union) No 2011/65/EC of Restriction of Hazardous Substances ("RoHS") and its subsequent amendments (including the exceptions No. 7.c. 1 of the EU Directive e.g. related to Pb)

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.

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