

SD1020

Dielectric / Glaze

Description

SD 1020 is an ultra-low bowing dielectric paste for insulating Cr-steel substrates mainly for heater applications. Designed for both 300 and 400 steel types, SD 1020 is Pb-free, screen printable, and fires at 850°C. SD 1020 is suitable for planar or cylindrical substrates. German Standard DIN Type UK / US 1.4301 X5 CrNi 18 11 AISI 304 1.4016 X6Cr17 AISI 430 1.4521 X2CrMoTi18-2 AISI 444

Key Features

- t fires to an extremely dense, hermetic film, allowing excellent electrical performance at a total fired film thickness of ≥ 70 µm Excellent compatibility with HERAEUS heater tracks, terminations, and overglazes

Typical Properties

Viscosity	150 – 250 kcps, Brookfield HBT DV-III, SC4-14 spindle & 6R utility cup @ 10 rpm, 25°C
Solids	
Blendable	
Coverage	
Color	
Resistivity	
Laser Trim	
Rel. Dielectric Constant	
Dissipation Factor	
Insulation Resistance	>109 ohms at 100 V
Breakdown Voltage	>3000 V (AC) 4 layers >2500 V (AC) 3 layers
Via resolution	

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Typical Properties (continued)

Thermal Coefficient of Expansion (CTE)

Solderability

Recommended Processing Guide

Printing Parameters

Print through 165 – 200 mesh stainless steel screen. A print-dry fire sequence is advised for each layer.

Printing Speed

Leveling

Drying Temperature

Dry at 150 °C for 20-30 minutes.

Process Temperature (TDS)

Fire at 850 °C (peak) for 10 – 12 minutes, and with a total firing cycle time of approx. 60 minutes

Film Thickness

Recommended Thinner

Heraeus RV-507

Paste Compatibility

Heating Tracks SR 21-350-025
SR 21-350-100
R2211, R2221
C2129A
9000 Series
R8900 Series
Termination C8728 (of Heating Tracks)
C2129A
G4741
Overglaze SD 1019
SD 1020
IP9036A

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Notes

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Warranty

Material guaranteed to meet specifications for 3 months from date of manufacturing with proper storage.

Storage

Store in a dry, cool (20 - 25°C), dark place with container tightly shut. Allow paste to come to room temperature prior to opening. Spatulate well before using.

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