Heraeus

Conductors

C 8728 A

Pb and Cd Free Silver Conductor / DPIS*

* Development Product Information Sheet

Description
C 8728 A is a pure silver conductor that yields a smooth, dense film on alumina. This material is recommended for general purpose and large ground plane areas.

Key Benefits
- High aged adhesion
- Excellent ultra-sonic wire bondability with Al thick wire
- Free of lead, nickel and cadmium
- Free of phthalate
- REACH [3] and RoHS [4] compliant

Processing
1. Spatulate well prior to processing. When stored in a fridge: The paste should have acquired room temperature before being opened, to avoid condensation.
2. Print through a 200 – 325 mesh stainless steel screen.
3. Level at room temperature for 5 – 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 c. 30 – 60 minutes.

Thinner HVS 100

Typical Properties (Pastes)

Form:	Thixotropic paste
Viscosity:	30 – 50 Pas (25 °C, D = 100 s^{-1})
Solids:	81.5 % ± 1.5 %
Printing Speed:	Up to at least 20 cm / s
Coverage:	c. 60 cm^2/g (FFT: 12 µm)
Shelf Life:	6 months from date of shipment with correct storage (in a dry, cool (5 to 25 °C) and dark place with container tightly shut)

Typical Properties (Fired) [1]

Fired Film Thickness [2]: (FFT)	10.0 – 15.0 µm
Resistivity [2]:	≤ 3.0 mΩ / ☐ (FFT: 12 µm)
Adhesion, aged [2]: (96Sn/3.5Ag/0.5Cu)	≥ 20 N (48 hrs, 150 °C)
Leach Resistance: (96Sn/3.5Ag/0.5Cu)	≥ 3 dips (245 °C, 5 s each)

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1 Typical property 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 96% after printing with a 200 mesh steel screen; thickness of screen and emulsion combined was c. 100 µm, and the resultant printed track was 500 µm wide.

3 REACH compliant according to the Annex XIV (Feb. 17, 2011) of Commission Regulation (EU) No 143/2011 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; 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. I of the EU Directive e.g. related to Pb)

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