Heraeus

Conductors

C2129A

Pb and Cd Free Silver/Palladium Conductor

Description:
C2129A is a high performance, lead, cadmium and nickel free mixed bonded Ag/Pd conductor material. It offers cost savings over standard Ag/Pd formulations while maintaining the advantages of leach resistance and aged adhesion. C2129A is also aluminum wire bondable.

C2129A is supplied with a rheology, which results in a dense, uniform fired film.

- **Key Benefits:**
  - Lead, cadmium and nickel free
  - Low cost
  - Excellent solderability and leach resistance
  - Low resistivity
  - Good Al wire bond adhesion (initial and aged)

- **Typical Properties:**

Resistivity:
< 6.0 milliohms per square at 12 microns FFT

Viscosity
120-180 kcps, Brookfield HBT SC4-14 spindle and 6R utility cup @ 10 rpm, 25°C

% Solids:
80% ± 1%

Solderability:
Sn62/Pb36/Ag2
@ 230°C , RMA flux
5 second dip
≥ 95%

Solder Leaching:
Sn62/Pb36/Ag2
@ 230°C , RMA flux
10 second dip
up to 3 x 10 sec dip

Adhesion:
Sn62/Pb36/Ag2
@ 230°C , RMA flux
80 x 80 mil pads

Initial:	≥ 5 lbs
48 hours @ 150°C	≥ 3 lbs (1 x 850°C)
	≥ 4 lbs (5 x 850°C)
1,000 hours @ 150°C	≥ 3 lbs (1 x 850°C)
	≥ 4 lbs (5 x 850°C)

Wire Bond Adhesion:
10 mil Al wire
99.999% Al, Elongation > 5%
5 x 850°C firing

Initial	> 400 gms
1,000 hours @ 150°C	> 400 gms

- **Recommended Processing Guidelines:**

Printing:
280 – 325 mesh stainless steel screen.
0.5 mil emulsion
1.1 mil wire.

Coverage:
85 cm^2/g at 12 microns FFT.

Drying:
Dry at 150°C for 10 minutes.

Firing:
850°C peak temperature
Dwell time at peak temperature of 10 minutes.

Film Thickness:

Wet:	30-36 microns
Dried:	22-27 microns
Fired:	10-15 microns

Thinner:
RV-372 (Terpineol)

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.

YY1010.4

Heraeus

Conductors

C2129A

Pb and Cd Free Silver/Palladium Conductor

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