ALUMINUM CONDUCTOR PASTE FOR SOLAR CELLS

Technical Data Sheet

PASE-12

APPLICATION

Aluminum conductor paste PASE-12 is specially designed to form p+ doped layer when fired on p-doped silicon (≤ 250 microns) photovoltaic devices. It is used to create thick-film back-side contact metallization with mono- and multycrystalline silicon solar cells. The product can be fired over a broad range of conditions including cofire process techniques with front contact silver paste. The pastes are compatible with other Analog™ pastes for solar cells metallization.

BENEFITS

- high efficiency;
- excellent BSF quality;
- very good surface properties – no beads, coloring, good adhesion;
- good printing characteristics,

TRANSPORTATIONS

Tightly capped plastic containers adapt to any kind of transport in compliance with the applied regulations.

STORAGE CONDITIONS

In original manufacturer's packaging

- storage place: roofed storage rooms and other covered storage facilities;
- storage temperature: from +5 to +30°C;
- relative humidity not more than 85%;
- avoid contacts with aggressive medium;
- do not expose to direct sunlight.

BEFORE USE

The paste must be kept at the temperature of (22±3) °C for 3 hours and then thoroughly stirred.

THINNING

Thinning is not recommended, since the pastes are supplied at the correct viscosity for application. If thinning becomes necessary to replace evaporated solvent, contact your local Monocrystal representative for thinning recommendation.

TYPICAL PROPERTIES	
Solid Content, % mass	70-80
Viscosity, (Haake RV-1, Cone 35/°1, D=10 s^{-1}, T=21,0±0,1 °C) , Pa·s	50-80
Fineness of grind, µm, no more than	25
Resistivity (normalized to 25µm on alumina), mOhm/sq., not more than	50
Bowing (200 micron wafer, 156x156), mm, not more than	1,5
PROCESSING RECOMENDATIONS	
Printing	230-325 mesh
Drying	250-300 °C for 1-5 minutes
Firing Range	750-950 °C
Firing Time at Peak Temperature	3-90 seconds
Firing Medium	Air
Shelf life	6 month

Firing conditions can be optimized to meet customer requirements

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