

CPP-F72C27R

Copper Particle Paste

Product Description

CPP-F72C27R is specially formulated with our core-shell copper particles to meet the demand for printed electronics, a solution for low cost application with high electrical conductivity.

Conventionally, the main obstacle for using copper particles is their stability and spontaneous oxidation in ambient conditions. The formation of a layer of silver coating onto the surface of copper particle prevents the oxidation of the copper core and preserves its metallic characteristic at the same time.

With the core-shell structure of particles, the stability of copper particles as well as copper particle paste are enhanced greatly.

Application

CPP-F72C27R is a conductive paste, which provide high conductivity, good adhesion and excellent printability on screen printing. It can be printed on various substrates, including PI, PEN, PC, Paper and PET.

Characteristics

Specification	Characteristics	Remarks
Appearance	Copperish	Visual
Texture	Smooth viscous paste	-
Average Particle Size	< 5 μ m	-
Viscosity @ 25°C (2 nd day)	30,000 cP ~ 90,000 cP	Brookfield CP51 spindle
Curing condition	1st step 120°C for 3 mins 2nd step 150°C for 2 mins	-
Sheet Resistivity, Ohm/ sq/mil(25 μ m)	< 75 m Ω /□/mil	-
Post print thermal stability in ambient air @ 200°C	Increase in 20% resistivity	200°C @ 30 mins in ambient air
Adhesion	100/100 ASTM	Cross Cut on PI
Solid Content	~ 70%	After 30 minutes @150°C

Curing Condition

1st step 120°C for 3 mins

2nd step 150°C for 2 mins

The curing of CCP-F72C27R can be carried out in ambient conditions by using hot air, infrared or ceramic lamp. Curing time and temperature may vary based on the application requirements and equipment.

Screen Printing

Mesh : 100 thread per cm
Tension : 22-24 N/cm²
Emulsion thickness : 15-25 μ m
Material : Polypropylene
Print Speed : 25mm/s
Cleaning Solvent : Dibasic Ester

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Recommended Tinning Solvent

Viscosity of CPP-F72C27R could be adjusted using Asahi CCP-T3S.

Storage and Shelf Life

Containers should be tightly sealed and store in a clean, dry and stable environment at room temperature (<25°C). Storing at temperature higher than 25°C will decrease the performance of the ink. Shelf life of material in unopened containers is 6 months from date of manufacturing. Settling of solids may occur and paste should be thoroughly mixed prior use.

Safety and Handling

For Safety and Handling information pertaining to this product, read the material safety data sheet (MSDS).

DISCLAIMER OF LIABILITY

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