Copprint LF-391 Beta

March 2024

Technical Data Sheet

PRODUCT DESCRIPTION

Copprint LF-391 provides the following product characteristics:

Technology	Screen printing
Appearance	Copperish paste
Filler Type	Copper
Product Benefits	• High conductivity • Excellent adhesion • High aspect ratio • High metal loading • Low-temperature sintering
Drying	Hot air
Sintering	Hot press
Application	Conductive Ink
Key Substrates	PI
Typical Assembly Applications	Printed electronics

Copprint LF 365 screen printable paste is formulated to provide high electrical conductivity.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Average particle Size, µm	D50 < 1.0, D90 < 7.0
Solids Content, after 10 minutes @ 150ºC, %	91.4±1.5
Density, g/ml	3.8±0.2
Viscosity @ 25^{0}C, DVEHA Brookfield spindle 14, 20rpm, mPa·s (cps)	45000-55000
Thixotropic Index (2/20 rpm)	5.6
Theoretical coverage @ 10µm dry film thickness,	16.7 m²/kg
Shelf Life @ -10°C, days	180
Pot life @ 25°C, Hours	72
Flash Point - See SDS	

RECOMMENDED CURING

Drying cycle
120sec @90^{0}C (Hot air, Reflow oven)

Sintering cycle
180 sec @ 200°C (Hot press)

The above drying is a guideline recommendation. Conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer drying equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Adhesion, (tape test 3M Scotch 234)	pass
Cross-cut test ISO 2409-2007	3-4 B

Electrical Properties - Sheet resistivity

Hot press @ 200ºC, 180sec ohm/sq/25 µm	< 0.009

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet (SDS).

DIRECTIONS FOR USE

Preparation guidelines

1. Copprint LF-391 is supplied as “Sinter ready” formulation ready for use.
2. Mix formulation prior to print.
   *Detailed procedure can be found in Application Notes www.copprint.com

Application (screen properties)

Emulsion, Solvent and Water resistant emulsion, µm	10 to 40
Squeegee Shore Hardness	70 to 90
Screen Type, Polyester screen, mesh	150 to 250

CLEAN-UP

The equipment can be cleaned with Dowanol DB (CAS# 112-34-5) followed by water.

STORAGE:

Store the product in a tightly closed container in a dry location below -10^{0}C. Open the container carefully. Storage information may be indicated on the product container labeling.

Optimal Storage: below -10°C. Storage above -10°C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return the product to the original container. Copprint cannot assume responsibility for products contaminated or stored under conditions other than those previously indicated.

Not for product specifications

The technical data contained herein are intended as reference only.