



## magiCu PE401 Copper Pressure Sinter Paste

magiCu PE401 is an innovative pressure-assist sintering material suitable for die attach application of high power packages. It forms a highly reliable joint with excellent thermal conductivity. This material is lead-free and does not contain halogens and nano particles.

### Pressure Sinter Paste Wet Placement Process



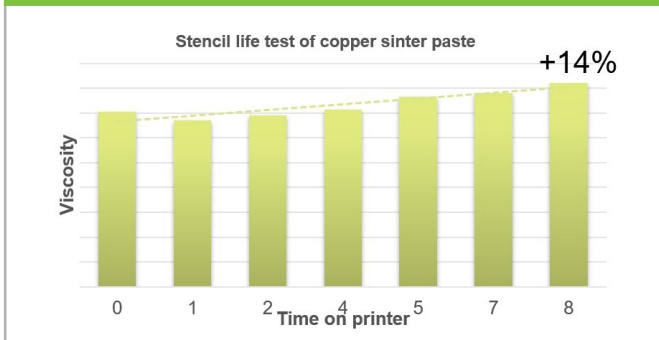
- No placement force and no temperature needed

- Drying at 150°C, < 50min N<sub>2</sub> atmosphere

- Temp: ≥ 260 °C
- Time: ≥ 5 min
- Pressure: ≥ 20MPa
- Atmosphere: N<sub>2</sub>

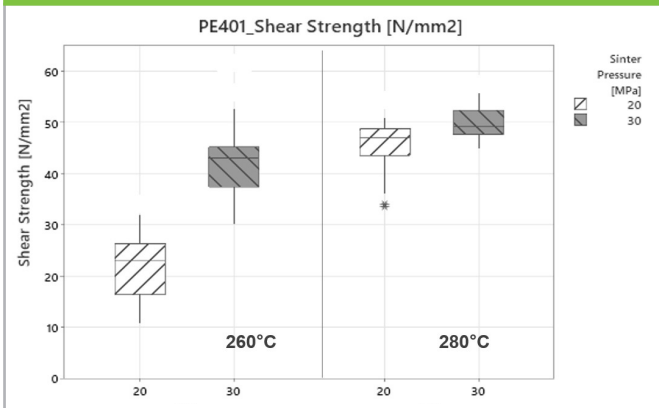
\* Varies depending on assembly

## Printing Application Over Time



- Excellent printing performance overtime
- Consistent paste deposit volume for high production efficiency
- Stable rheology for long stencil life

## Die Shear Strength for Different Process Parameters (Wet Placement Process)



## Benchmarking:

Lead free solder paste vs. magiCu PE401 Cu sinter paste

Series	Solder Paste SnAg3.5	magiCu PE401
Process Temperature (°C)	~ 250	≥ 260
Thermal Conductivity (W/m.K)	57	> 200
CTE (ppm/K)	27.9	16.7

## Product Properties

### magiCu PE401

Alloy	Copper
Fillers	0 %
Particle size	≤ 25 μm
Sinter temperature	≥ 260 °C
Halogen content	Halogen zero
Compatible surfaces	Ag, Au, Cu
Sinter atmosphere	N <sub>2</sub>

## Application/Process

Printing	Yes
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## Features and benefits

Work life	8 hours
Shelf life	6 months
Residue cleaning	Not required
Storage condition	2 - 10 °C

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