



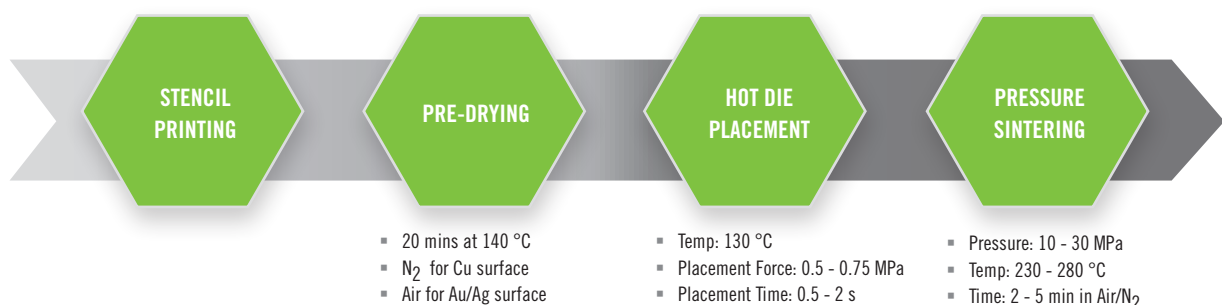
mAgic® PE338 Silver Pressure Sinter Paste for Stencil Printing

mAgic® PE338 Ag Pressure Sinter Paste is a lead-free die attach material with improved sinterability on copper surfaces.

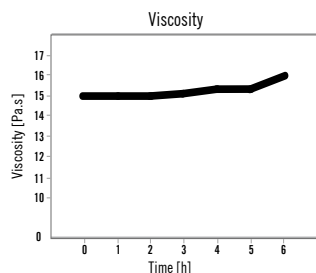
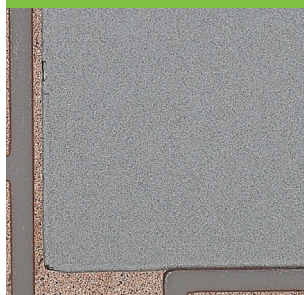
mAgic® PE338 F1510 Ag Pressure Sinter Paste is a patented high reliability material that increases life time performance with wide band gap material SiC and GaN.

Key Features

- Improves device reliability
- High thermal conductivity for longer lifetime
- High electrical conductivity improves device efficiency
- Enables high operating temperature
- Lead-free and halogen zero formulation for environmental compliance
- No flux residue, no cleaning required

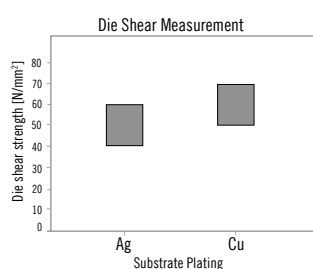
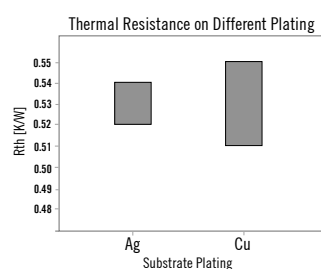


Printing Application Over Time

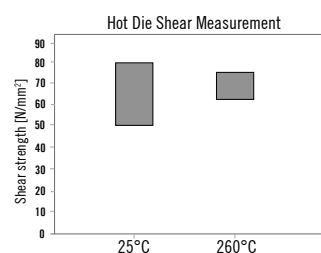


- Excellent printing performance overtime
- Consistent paste deposit volume for high production efficiency
- Stable rheology for long stencil life

Thermal Conductivity and Die Shear Strength Chart



- Die Size: 4x4 mm, Ag Die
- Pressure Applied: 230 °C, 10 MPa, 3 mins ; 20 MPa, for Cu



- Die Size: 10x10 mm, Ag Die, Cu Substrate
- Pressure Applied: 230 °C, 20 MPa, 5 mins

Product Properties	PE338	PE338 F1510
Alloy	Silver	
Metal Content	82%	73%
Fillers	0%	10%
Particle Size	≤ 20 μm	
Sinter Temperature	≥ 230°C	
Halogen Content	Halogen Zero	
Compatible Surfaces	Ag, Au, Cu	
Sinter Atmosphere	Air, N ₂	

Application Process		
Printing	Yes	
Features and Benefits		
Work Life	8 hours	
Shelf Life	6 months	
Residue Cleaning	Not required	
Storage Condition	2 to 10°C	
Reliability Test	Condition	Results
TCT (Temperature Cycle Test)	-65 °C / +150 °C	Passed
PCT (Pressure Cooker Test)	121 °C, 100 % RH, 2 atm	Passed
HTST (High Temperature Storage Test)	250 °C, 1000 hrs	Passed
Un-Biased HAST	130 °C / 85 %, 96 hrs	Passed

Benchmarking (Lead Free Solder Paste vs. PE338 Ag Sinter Paste Series)

Series	Solder Paste (SnAg3.5)	mAgic Paste (PE338)	mAgic Paste (PE338 F1510)
Process Temperature (°C)	~ 250	> 230	
Electrical Resistivity (mΩ.cm)	0.02	≤ 0.010	
Thermal Conductivity (W/m.K)	57	> 200	
CTE (ppm/K)	27.9	19	15
E-Modulus (GPa)	33.4	40 - 65	25 - 40

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