



Applied Nanotech, Inc.

a PEN Inc company

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Ag-PM100

Silver Paste

ANI's Ag-PM100 is a micron sized silver paste with high conductivity, low thermal sintering temperature and fast curing time which will be suitable for different printing technology, such as flexo, gravure and screen printing. The low curing temperature allows for applications in printed electronics using low cost flexible polymer substrates such as PET. The Ag-PM100 Ag paste can be cured within 1min which makes it suitable for roll to roll fast printing process. The solid content loading can be adjusted from 60-80 wt% to suit customer specifications.

Typical properties

Part number	Ag-PM100
Particle Size	80 nm-10 µm
Resistivity	5-30 µΩ-cm*
Solid Content	60-80 wt%**
Viscosity	8,000-10,000 cP***
Solvent	Organic

*Dependent on sintering temperature - higher temperature results in lower resistivity and substrate

** Available from 10-70 wt%

*** Measured at 100rpm and 25°C with Brookfield VLDV-II+PRO/ULA viscometer



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Application Notes: Ag-PM100 Silver Paste

Description

ANI's Ag-PM100 is a silver paste suitable for contact printing highly conductive lines and patterns for applications in the printed electronics industry. Ag-PM100 paste can be thermally sintered at low temperatures on glass, PET and polyimide substrates.

Storage and Shelf Life

Ag-PM100 should be stored in a tightly sealed, leak-proof container at room temperature. Ag-PM100 paste may be stored for up to 6 months.

Safety and Handling

When working with Ag-PM100 paste, use adequate ventilation and wear appropriate protective gear. Ag-PM100 paste can cause eye and skin irritation. The following precautions should be taken when handling Ag-PM100 paste.

- Read the Material Safety Data Sheet (MSDS)
- Avoid prolonged breathing of vapors
- Use appropriate safety equipment, such as gloves and eye protection
- Wash hands thoroughly after handling
- Keep the ink container closed when not in use to prevent drying and spilling

Pre-processing

- The Ag-PM100 paste should be well mixed before use.

Printing

- Printing has been demonstrated using screen print, flexographic, and gravure techniques. Conditions will vary based on substrate and technique.

Drying

- Printed paste on substrate can be dried at 100°C for 10 minutes in ambient atmosphere.

Sintering

- Ag-PM100 will be conductive after 30 minutes at 100°C.
- Ag-PM100 will reach the minimum resistivity after 30 minutes at 300°C.
- Curing the printed sample in convection oven is recommended.

Clean-up

- Follow appropriate cleaning procedures for equipment used to dispense Ag-PM100 paste. Excess ink can be removed with ethanol, IPA, or acetone.

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Processing Procedures