



Application Note: Conductive Inks – Silver Nanoparticles

Conductive inks are fast growing field utilizing advancement of inkjet technology. With ink jettable conductive inks, more sophisticated patterns with finer definition can be printed for RFID. Silver nanoparticles are one of the conductive inks.

Objectives: In this note, three commercially available ceramic inks are tested with *microVISC* to demonstrate the accuracy, easy-of-use, and throughput.

Silver nanoparticle Inks:

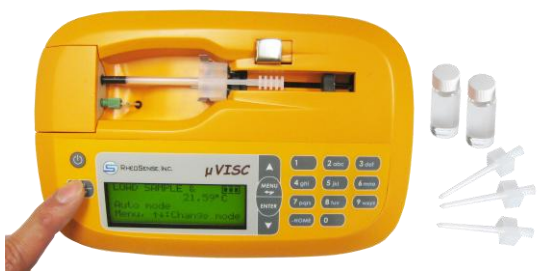
The inks were purchased from Sigma Aldrich.

Measurement steps:

1. Sample loading into a disposable pipette



2. Testing (Auto and Advanced mode)



3. Cleaning (cleaning mode)

The chip was cleaned once with corresponding solvent to the test sample. No cleaning is necessary if the next sample in question is miscible with previous sample. Subsequent cleaning is highly recommended for storage longer than two days. Refer to VISC-APP-07.

Results: Viscosity was measured at ambient condition (22.6 ~ 22.9 °C) with HA01-01 chip.

Silver Nanoparticle Ink	
Temperature, °C	Viscosity (cP)
21	14.2
21	14.3
21	14.4
21	14.7
21	14.8

Summary:

- Viscosity values are constant irrespective of shear rate tested.
- Each measurement takes less than 1 minute.
- Rapid viscosity measurement.

If you have questions or need more information about this product or other applications, please contact us:

Main office — 1 925 866 3801

Information — info@rheosense.com

Sales — sales@rheosense.com

