

Conductive Silver Ink Sink10

Description:

Recently new printing methods were developed to manufacture flexible electronics. Between these methods, using conductive inks has a low material waste, simple manufacturing process, low prices, large area, high precision, and many other advantages. Therefor, metal nanoparticles based conducting inks for direct patterning on flexible substrates represent the most promising manufacturing way. Ag nanoparticles for its low resistivity and stable property has been considered as the most appropriate conductive ink.

| Characterization | | |
|---------------------------------------|--------------------|-------------|
| CAS | 1003582-37-3 | |
| Stock No. | Sink1011 | Sink1012 |
| Ag content (%w/v) | 7 | 40 |
| Particle size (nm) | 20-60 | 20-60 |
| Ink vehicle | Hydrocarbon | Water |
| Color | Olive | Olive |
| Curing temperature | RT | RT |
| Curing time (min) | 5-15 | 10-20 |
| Substrate | Glass and polymers | Paper |
| Viscosity | Thin liquid | Thin liquid |
| Sheet resistance (Ω/\square) | <0.1 | <0.1 |
| Adhesion (tape cross hatch) | No Transfer | No Transfer |



Image of nano silver ink
(Sink10)

Note: product specifications are subject to amendment and may change over time.

Drying condition:

Dry in ambient condition. No heating or blowing is needed.

Storage and Shelf life:

Keep it in cool dry place.

Avoid direct sunlight.

Do not freeze.

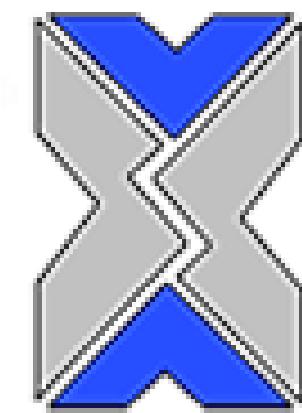
Do not leave it open for long time.

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature (25°C).

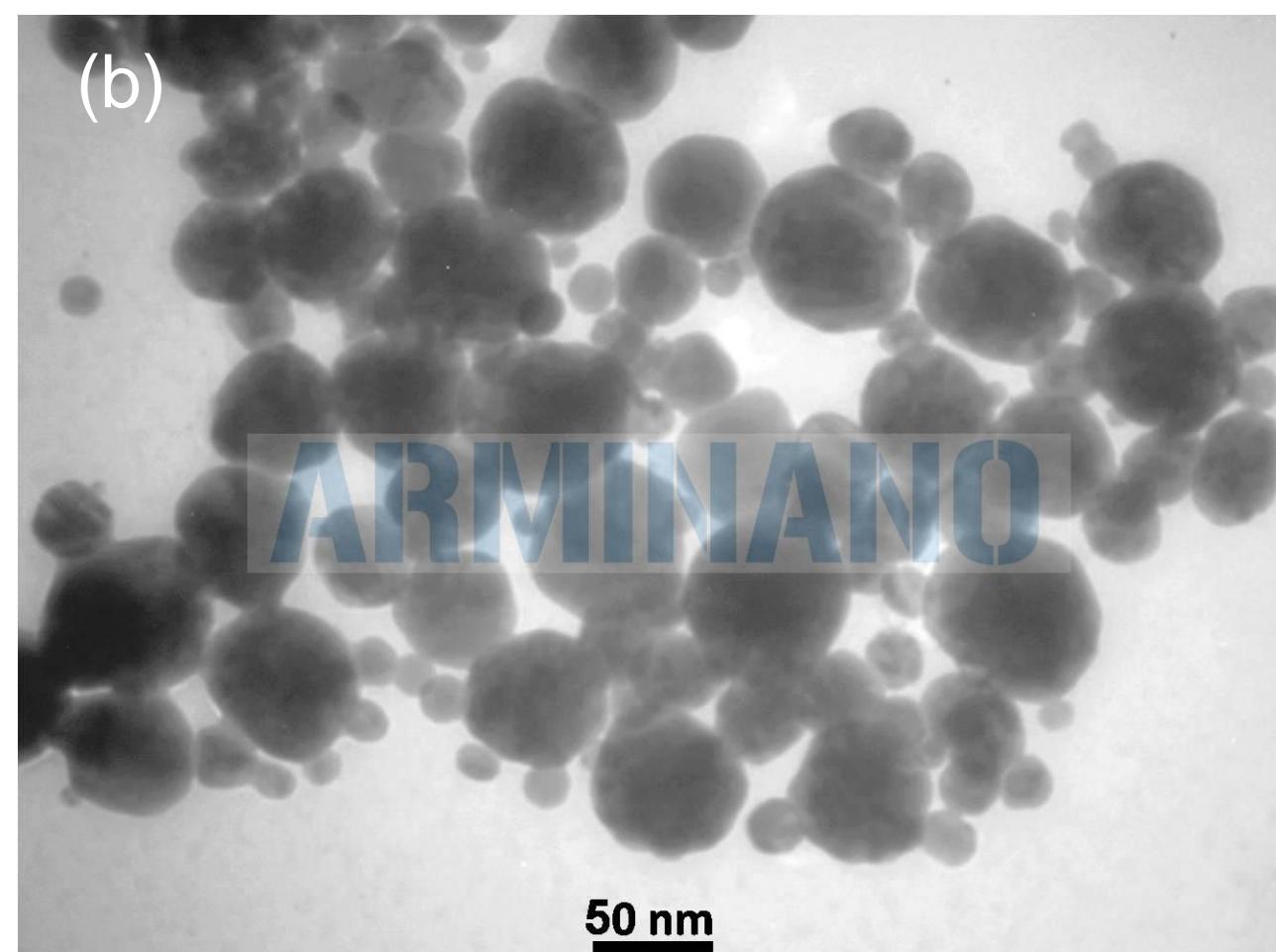
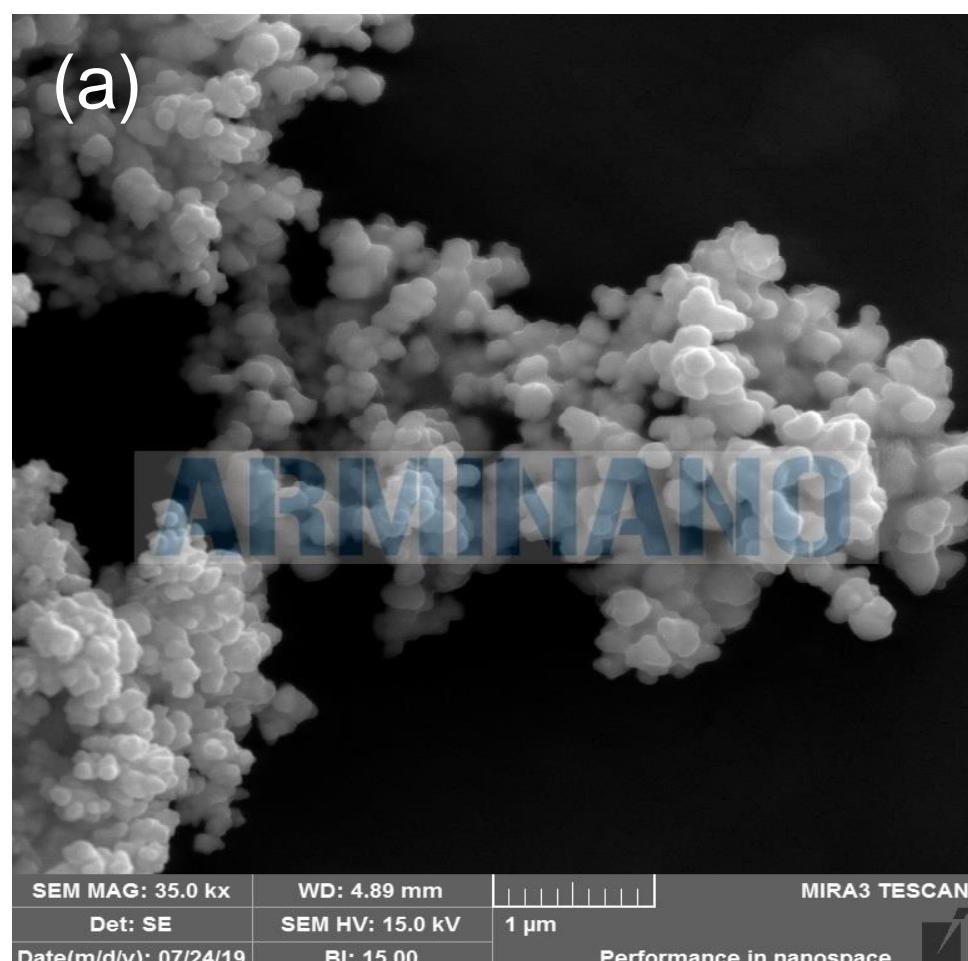
Shelf life of material in unopened containers is six months from date of shipment.

Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

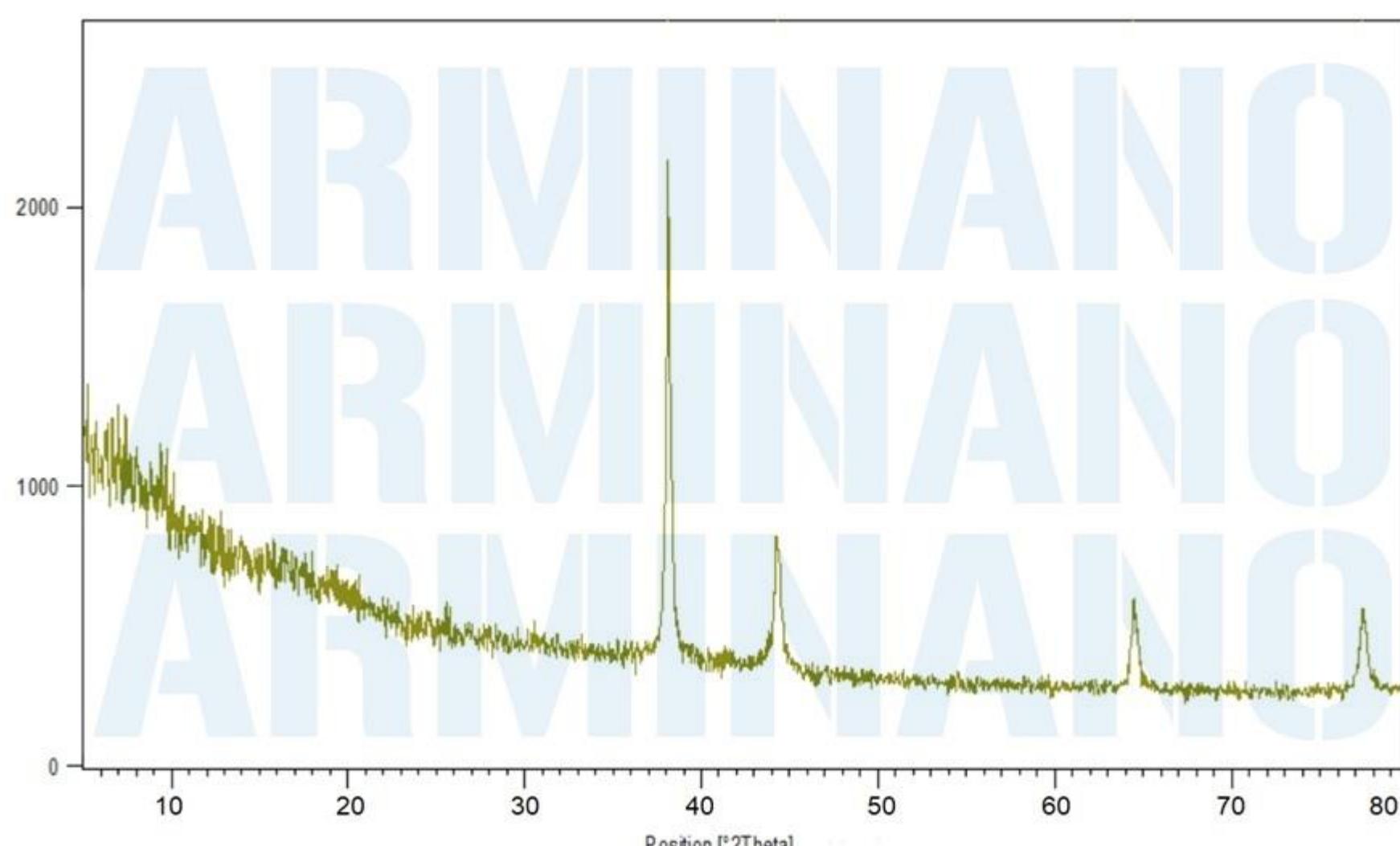
Tinning is not recommended.



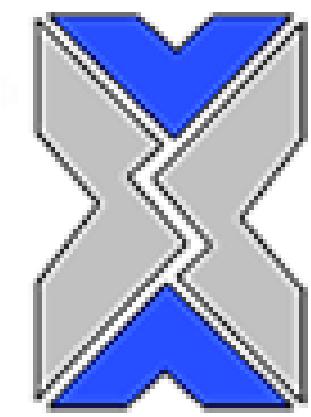
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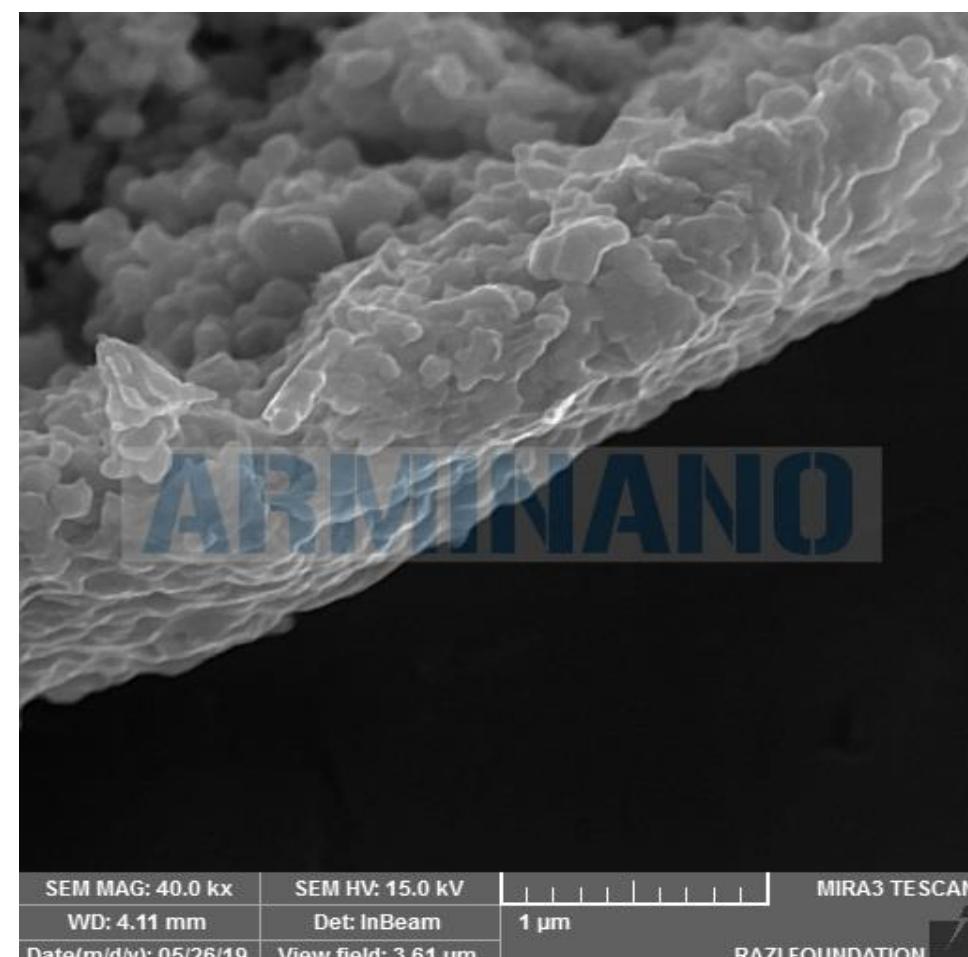
(a) SEM and (b) TEM images of silver nanoparticles used in Sink10



XRD pattern of silver nanoparticles used in Sink10



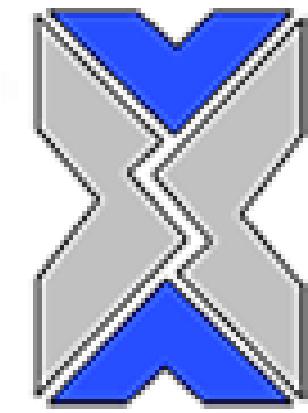
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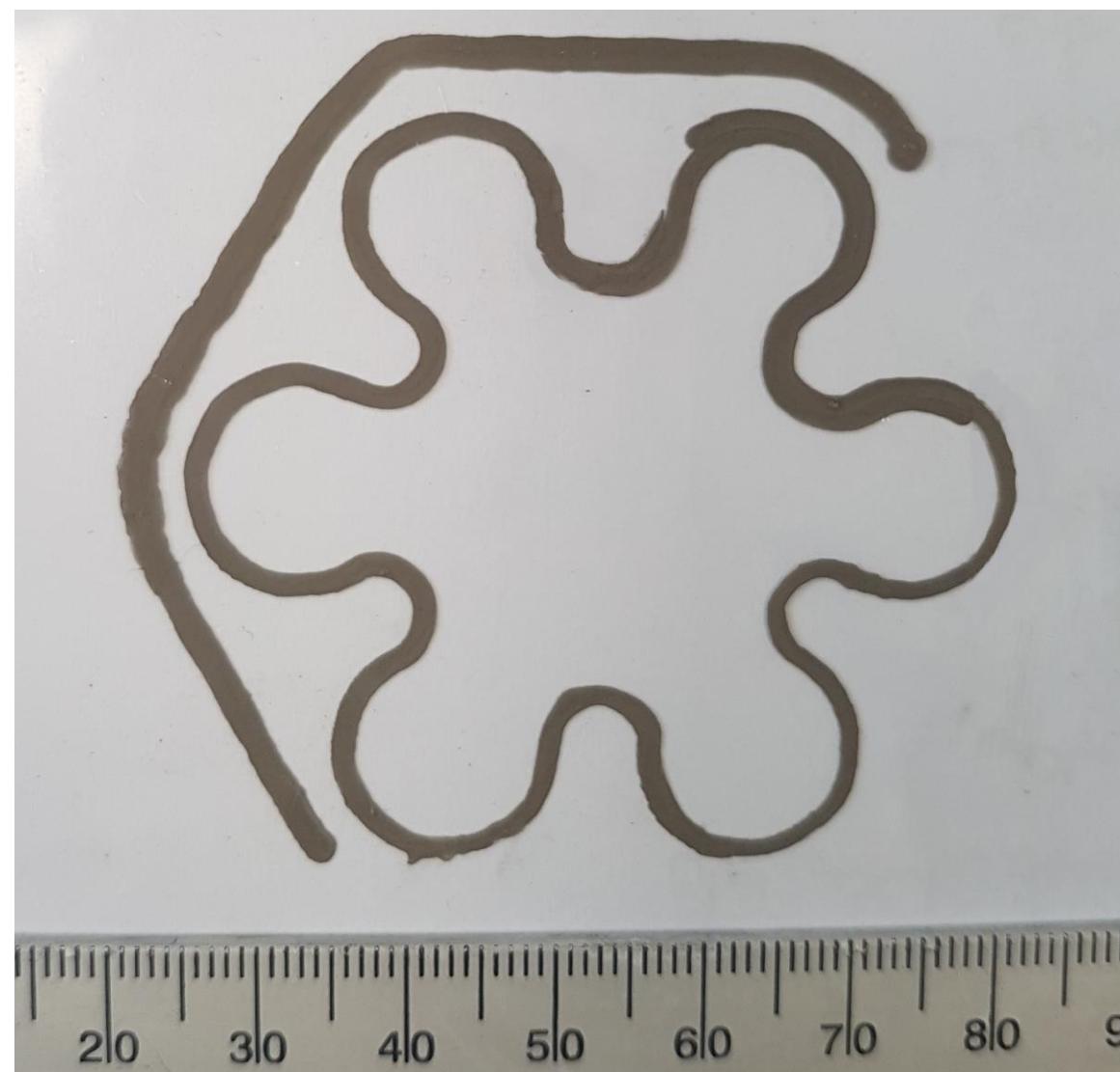
SEM image of cross section of
Sink1012 after drying in air



Images of printed circuit board with Sink1012



Conductive Silver Ink Sink10



Printability of Sink1011 with 3D printer
(800 μ m nozzle)

Safety:

Always use protective gloves and safety glasses.
Wash with soap and water after exposure.
Contains flammable solvents.
Avoid contact with skin and breathing of vapors.