



## Metalon<sup>®</sup> Conductive Inks for Printed Electronics

[www.novacentrix.com](http://www.novacentrix.com)

### Metalon<sup>®</sup> HPS-U11 High Conductivity Silver Screen Ink

- Particle:** 80 nm silver particles
- Substrates:** Paper, plastics, glass, metals
- Features:**
- Very high conductivity for low temperature curing
  - Excellent water and alcohol resistance
  - Fine line printing
  - Flexible and good adhesion to a variety of substrates
  - Printing equipment cleans with isopropanol
  - Lower Ag concentrations available for lower viscosity applications

**Thermal cure data:**

Substrate	Cure Temperature <sup>1</sup> (°C)	Cure Time (minutes)	Volume Resistivity <sup>2</sup> (Ω-cm)	Sheet Resistivity <sup>2</sup> (Ω/sq/mil)
PET - Melinex ST505	100	120	5.1E-05	0.0199
	120	60	1.1E-05	0.0045
	140	30	7.4E-06	0.0029
Polyimide – Kapton HN	175	10	4.8E-06	0.0019
	200	10	4.7E-06	0.0019
	225	10	4.4E-06	0.0017
	250	10	4.4E-06	0.0017
	275	10	4.1E-06	0.0016

<sup>1</sup>Pre-cure drying at 140C for 10 minutes for cure ≥ 175C, <sup>2</sup>Typical value based on #10 drawdown and 25% porosity, typical dried coating 0.003g/cm<sup>2</sup>

<b>Physical Properties</b>	<b>General Description</b> ..... Ag nanoparticle ink in butyl carbitol acetate <b>Viscosity (typical values)</b> ..... 190,000 cP at 10sec <sup>-1</sup> , 35,000 cP at 100 sec <sup>-1</sup> <b>Specific Gravity</b> ..... 3.5 <b>Flash Point</b> ..... Non-flammable <b>Particle Size</b> ..... D50 80 nm <b>Ag Content</b> ..... 80% w/w
<b>Storage and Printing</b>	<b>Storage</b> ..... Room temperature <b>Shelf life</b> ..... >6 months <b>Cleaning solvent</b> ..... Isopropanol <b>Screen mesh material</b> ..... Stainless steel or polyester <b>Screen mesh count</b> ..... 400 to 80 wires per inch
<b>Shipping and Packaging</b>	Standard sample order is 100g or multiples of 100g. Inquire directly for packaging of larger quantities.

[www.novacentrix.com](http://www.novacentrix.com)  
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