



Metalon® Conductive Inks for Printed Electronics

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Metalon® JS-B25HV

Nanosilver Ink – Aqueous dispersion for Dimatix Printheads

JS-B25HV is an electrically conductive ink designed to produce circuits on porous and non-porous substrates including inkjet papers, PET, polyimide, and glass. JS-B25HV ink is specially formulated for compatibility and stability with Dimatix printheads. A printing waveform for Dimatix DMP heads is available.

<p>Performance Properties</p>	<p>Metalon JS-B25HV when printed and cured, produces conductive traces that attain as low as 2x bulk Ag resistivity.</p> <p>Sample Conductivity</p> <table border="1" data-bbox="415 808 1182 953"> <thead> <tr> <th></th> <th>Units</th> <th>JS-B25HV</th> </tr> </thead> <tbody> <tr> <td>Thin film resistivity</td> <td>Micro ohm-cm</td> <td>2.8</td> </tr> <tr> <td>Thin film sheet resistance</td> <td>Milliohm/square</td> <td>50</td> </tr> <tr> <td>Bulk resistivity comparison</td> <td>$\rho(\text{film})/\rho(\text{bulk Ag})$</td> <td>1.8</td> </tr> </tbody> </table> <p>Sample Information Substrate¹: Novole™ IJ-220 (a coated PET) Printer: Dimatix Materials Printer (DMP-2800 Series) Post-Process Tool: PulseForge® 3100 in 6" configuration Environment: Atmosphere – no special preparation</p>		Units	JS-B25HV	Thin film resistivity	Micro ohm-cm	2.8	Thin film sheet resistance	Milliohm/square	50	Bulk resistivity comparison	$\rho(\text{film})/\rho(\text{bulk Ag})$	1.8						
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<p>Physical Properties</p>	<p>General Description Water-based Ag ink Flash Point Non-flammable</p> <table border="1" data-bbox="415 1239 1076 1453"> <thead> <tr> <th></th> <th>Units</th> <th>JS-B25HV</th> </tr> </thead> <tbody> <tr> <td>Ag content</td> <td>wt%</td> <td>25</td> </tr> <tr> <td>Viscosity</td> <td>cP</td> <td>8</td> </tr> <tr> <td>Surface tension</td> <td>dyne/cm</td> <td>30-32</td> </tr> <tr> <td>Z-avg particle size²</td> <td>nm</td> <td>60</td> </tr> <tr> <td>Specific gravity</td> <td>–</td> <td>1.3</td> </tr> </tbody> </table> <p>² Malvern dynamic light scattering</p>		Units	JS-B25HV	Ag content	wt%	25	Viscosity	cP	8	Surface tension	dyne/cm	30-32	Z-avg particle size ²	nm	60	Specific gravity	–	1.3
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<p>Shipping and Packaging</p>	<p>Standard sample order is 50 mL or multiples of 50 mL. Bulk packaging is also available.</p>																		

¹recommended for use on the following substrates: inkjet paper, Novole™ IJ-220, PET, Polyimide, glass

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Contact us today to learn more.
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Performance with Traditional Oven Thermal Processing on Novele™ IJ-220

Time (min)	Resistivity ($\mu\text{ohm-cm}$)			
	25C	60C	100C	125C
0	31	35	38	35
5	25	9.8	6.9	5.8
480 (8 hours)	8.0	7.4	6.5	5.7

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