



Metalon® Conductive Inks for Printed Electronics

www.novacentrix.com

Metalon® JS-A101 and JS-A102

Nanosilver Ink – Aqueous dispersions for Inkjet Printing

JS-A101 and JS-A102 are electrically conductive inks designed to produce circuits on non-porous substrates including polycarbonate, PET, and polyimide. The inks can be thermally cured or PulseForge® processed. The JS-A series inks are specially formulated for compatibility and stability with various printheads including those manufactured by Dimatix and Xaar. Printing waveforms are available by request.

Performance Properties	PulseForge 1200		Thermal ³		Units																								
	JS-A101	JS-A102	JS-A101	JS-A102																									
Sheet resistance ¹	25	25	200	200	milli-ohm/square																								
Volume resistivity ²	7.8E-06	7.8E-06	6.2E-05	6.2E-05	ohm-cm																								
Pencil hardness	>4H	>4H	>4H	>4H	--																								
<p>Printed on Melinex ST505 with Dimatix DMP-2831 at 20 micron drop spacing.</p> <p>The inks also display excellent crosshatch adhesion and water resistance after full curing.</p> <p>¹Typical values.</p> <p>² Value calculated based on estimate of 50% porosity in cured print.</p> <p>³Thermal cure: 140C 10 minutes</p>																													
Physical Properties	<p>General Description Water-based Ag ink</p> <p>Flash Point Non-flammable</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th></th> <th style="text-align: center;">JS-A101</th> <th style="text-align: center;">JS-A102</th> <th style="text-align: center;">Units</th> </tr> </thead> <tbody> <tr> <td>Ag content</td> <td style="text-align: center;">40</td> <td style="text-align: center;">40</td> <td style="text-align: center;">wt%</td> </tr> <tr> <td>Viscosity</td> <td style="text-align: center;">5-7</td> <td style="text-align: center;">8-12</td> <td style="text-align: center;">cP</td> </tr> <tr> <td>Surface tension</td> <td style="text-align: center;">25-30</td> <td style="text-align: center;">25-30</td> <td style="text-align: center;">dyne/cm</td> </tr> <tr> <td>z-avg particle size⁴</td> <td style="text-align: center;">40-60</td> <td style="text-align: center;">40-60</td> <td style="text-align: center;">nm</td> </tr> <tr> <td>Specific gravity</td> <td style="text-align: center;">1.6</td> <td style="text-align: center;">1.7</td> <td style="text-align: center;">–</td> </tr> </tbody> </table> <p>⁴Malvern dynamic light scattering</p>						JS-A101	JS-A102	Units	Ag content	40	40	wt%	Viscosity	5-7	8-12	cP	Surface tension	25-30	25-30	dyne/cm	z-avg particle size ⁴	40-60	40-60	nm	Specific gravity	1.6	1.7	–
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Shipping and Packaging	Standard sample order is 50 mL or multiples of 50 mL. Bulk packaging is also available.																												

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Contact us today to learn more.
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