



Metalon[®] Conductive Inks for Printed Electronics

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Metalon[®] JS-A101A and JS-A102A

Nanosilver Ink – Aqueous dispersions for Inkjet Printing

JS-A101A and JS-A102A are electrically conductive inks designed to produce circuits on non-porous, temperature-sensitive substrates including polycarbonate and PET. 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, Xaar and HP. Printing waveforms are available by request.

Performance Properties	PulseForge 1200		Thermal ³		Units																								
	JS-A101A	JS-A102A	JS-A101A	JS-A102A																									
Sheet resistance ¹	25	25	< 100	< 100	milli-ohm/square																								
Volume resistivity ²	7.8E-06	7.8E-06	< 3.1E-05	< 3.1E-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: 10px;"> <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;">19-30</td> <td style="text-align: center;">19-30</td> <td style="text-align: center;">dyne/cm</td> </tr> <tr> <td>z-avg particle size⁴</td> <td style="text-align: center;">30-50</td> <td style="text-align: center;">30-50</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;">1.6</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	19-30	19-30	dyne/cm	z-avg particle size ⁴	30-50	30-50	nm	Specific gravity	1.6	1.6	–
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Shipping and Packaging	<p>Standard sample order is 50 mL or multiples of 50 mL. Bulk packaging is also available.</p>																												

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Contact us today to learn more.
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