

DOWSIL™ Inkjet-Printable Silicone Optically Clear Resins (developmental)

The benefits of silicone with the advantages of inkjet printing

DOWSIL™ Inkjet-Printable Silicone Optically Clear Resins (developmental) – including DOWSIL™ MX-3101 Optically Clear Resin (developmental) and DOWSIL™ JX-7005 Optically Clear Resin (developmental) – offer excellent reliability, good UV and chemical resistance, and reduced shrinkage. When applied via inkjet printing, manufacturers can reduce process cost, reduce waste and increase production speed.

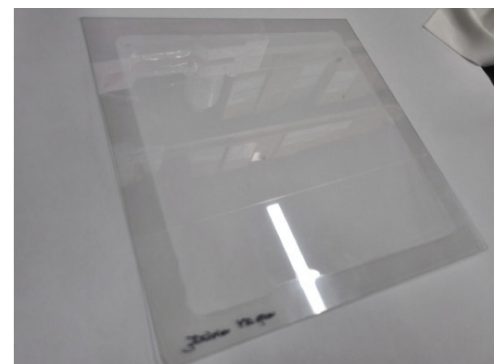
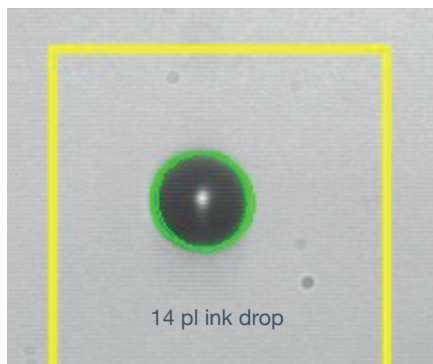
Applications

- Flexible and foldable displays
- Consumer displays
- Automotive displays

Properties of DOWSIL™ Inkjet-Printable Silicone Optically Clear Resins

Property	DOWSIL™ MX-3101 Optically Clear Resin (developmental)	DOWSIL™ JX-7005 Optically Clear Resin (developmental)
Type	1-part	1-part or 2-part
Cure chemistry	UV radical cure	UV-activated addition cure
Viscosity	18 mPa.s @ 25°C 11 mPa.s @ 40°C	18 mPa.s @ 25°C
Surface tension	30 mN/m	22 mN/m
Cure condition	3 J/cm ²	365 nm-LED (20 J/cm ²) + post-heat cure (60°C, 5 min)
Transmittance @ 550 nm	>99%	99%
Yellow (b*)	0.01	0.13
Haze	0.2%	0.2%
Refractive index @ 25°C	1.47	1.46
Storage modulus	3.1x10 ⁴ Pa @ 25°C	1.1x10 ⁴ Pa @ 25°C
Target application	Consumer displays	Automotive displays

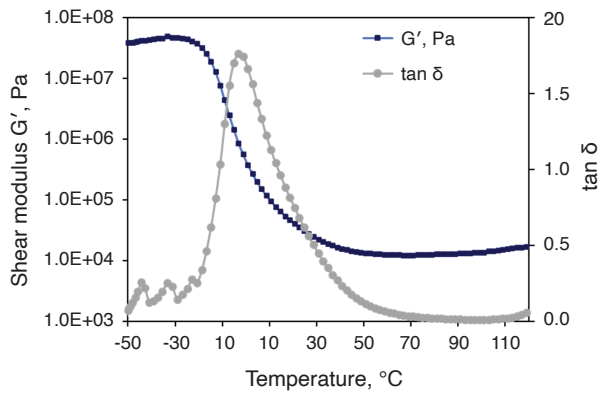
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Example of inkjet printing with a Konica Minolta KM1024MHE/14PL printhead on glass without surface treatment.

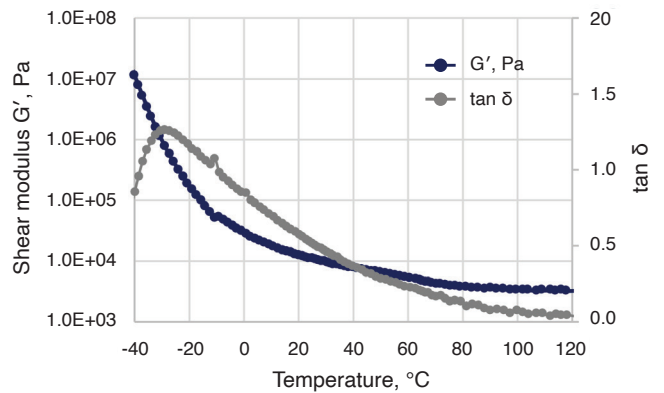
Dynamic mechanical analysis – temperature sweep

DOWSIL™ MX-3101 Optically Clear Resin (developmental)⁽¹⁾



⁽¹⁾Test conditions: Frequency: 1 Hz; shear strain: 1%.

DOWSIL™ JX-7005 Optically Clear Resin (developmental)⁽²⁾



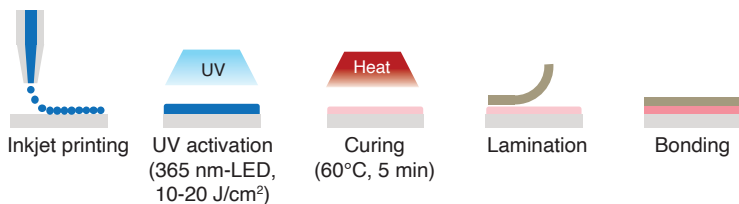
⁽²⁾Test conditions: Frequency: 1 Hz; shear strain: 1%.

Proposed application procedures

DOWSIL™ MX-3101 Optically Clear Resin (developmental)



DOWSIL™ JX-7005 Optically Clear Resin (developmental)



Learn more

We offer more than just an industry-leading portfolio of advanced silicone-based materials. As your dedicated innovation leader, we bring process and application experience, a network of technical specialists, a reliable global supply base, and world-class customer service.

To find out how we can support your applications or to learn more about developmental DOWSIL™ Inkjet-Printable Silicone Optically Clear Resins, contact us or visit dow.com/displays or dow.com/electronics.



Seek Together™

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