

Cubic Ink® High Performance 2-301

Rigid material with a good temperature form-stability and chemical resistance for final part production

Liquid Properties	Value ¹	Unit
Viscosity @ 50 °C (DIN EN ISO 3219)	31	mPa·s
Density (DIN EN ISO 15212-1)	1.11	g/mL
Surface Tension (Dynamic Bubble Pressure)	44	mN/m
Tensile Properties² (DIN EN ISO 527-5A)		
Ultimate Tensile Strength	86	MPa
Tensile Modulus	2400	MPa
Elongation at Break	3.5	%
Flexural Properties³ (DIN EN ISO 178)		
Flexural Strength	110	MPa
Flexural Modulus	2500	MPa
Deflection at Fracture	4.5	%
Impact Properties (DIN EN ISO 180)		
Izod unnotched	142	J/m
Hardness (DIN EN ISO 7619)		
Shore Hardness (green)	55 - 75	A
Shore Hardness	82	D
Thermal Properties		
HDT A (DIN EN ISO 75)	132	°C
HDT B (DIN EN ISO 75)	150	°C

Electrical Properties⁴

Dielectric strength (IEC60243-1)	22	kV/mm
Dielectric strength after 24 h/RT H ₂ O (IEC60243-1)	21	kV/mm
Relative Permittivity (Dielectric Constant, 23 °C, 1 MHz, IEC60250)	5.8	-
Dissipation Factor (24 °C, 1 MHz, IEC60250)	0.025	-
Volume Resistivity (IEC60093)	6.6 x 10 ¹⁴	Ω·cm
Volume Resistivity after 7 d/RT H ₂ O (IEC60093)	3.5 x 10 ¹⁴	Ω·cm
Comparative Tracking Index (IEC60112)	>600	V

Chemical Resistance⁵

Water Uptake, 24 h, 23 °C	0.2	%
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Thermal Ageing^{5,6}

160 °C for 1000 hours	<1	%
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Ageing at -40 °C^{5,6}

for 1000 hours	5	%
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Print Appearance/ Color

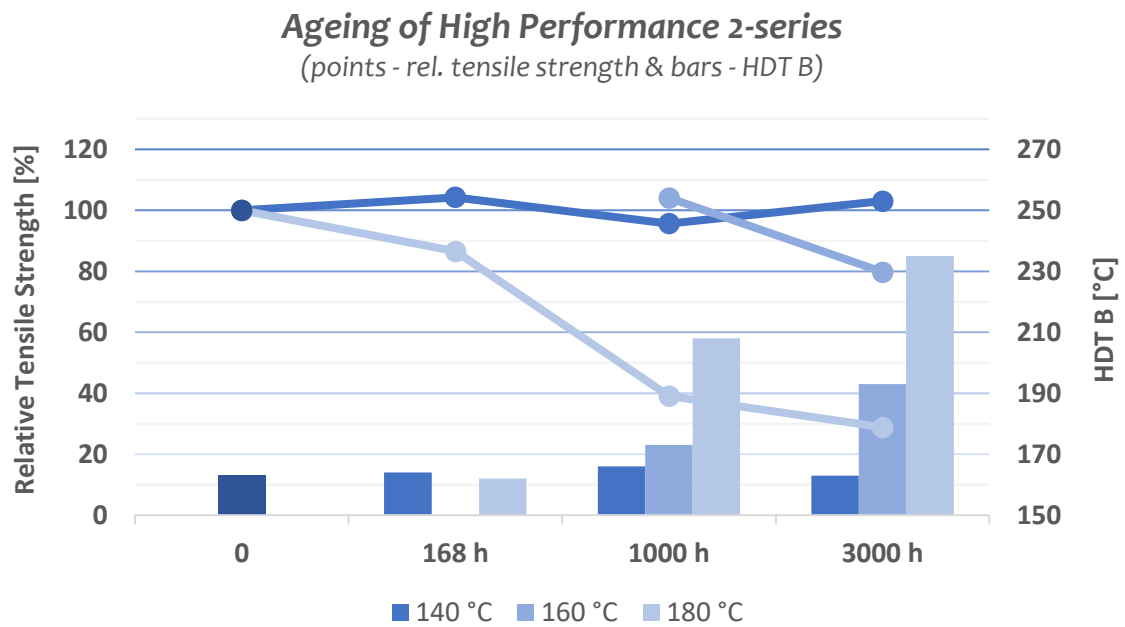
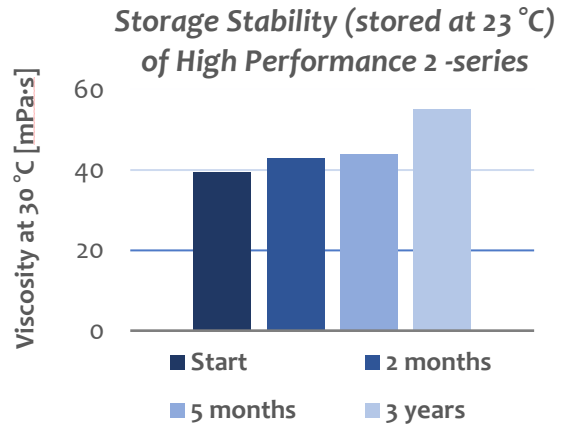
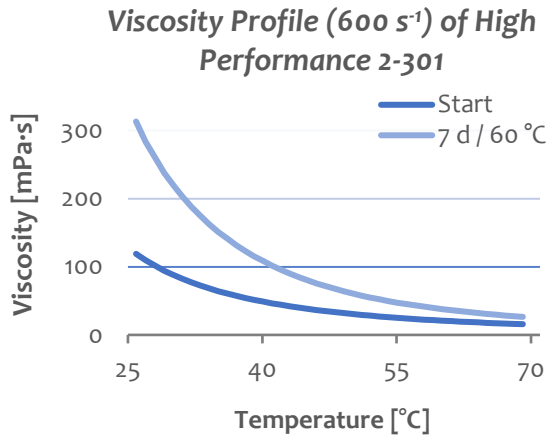
Natural color is translucent yellow. More colors on request.

Availability and Storage

Batch sizes starting from 1 kg.

Store at 8 °C and protect from light.

¹Properties with post-processing – washed with IPA, thermal post-cure. All material properties can vary with printer, print settings, object orientation, part geometry, post-processing and age of sample. ²5 mm/min; ³10 mm/min; ⁴Properties characterized on High Performance 2-301 VP; ⁵Properties characterized on High Performance 2-300 VP; ⁶Relative loss of tensile strength DIN EN ISO 527-5A, 5 mm/min.



Chemical Resistance	Mass Gain [%] ¹
Water	0.2
Acetic Acid (5%)	0.2
Hydrochloric Acid (1%)	0.2
Nitric Acid (5%)	0.2
Sodium Hypochlorite (10%)	0.2
Hydrogen Peroxide (3%)	0.3
Sodium Hydroxide (1%)	0.2
Isopropyl Alcohol	0.1
Methanol	0.7
Butyl Glycol Acetate	0.1
Super Gasoline	0.1
Acetone	0.1
Methyl Ethyl Ketone	0.1

¹Percent weight gained after 24 h submersion of printed and post-cured (thermal treatment up to 160 °C) 1 x 1 x 1 cm cubes. Properties characterized on High Performance 2-300 VP.

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