



**NORYL™ Resin PX9406K**  
**Asia Pacific: COMMERCIAL**

NORYL\* PX9406K resin may be suitable for consumer electronics applications. Flame retardant used is non-halogenated. UL94 V0 at 1.5 mm, 5VB at 2 mm, and 5VA at 2.5 mm. RTI (impact) = 105 C

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	670	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	500	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5.7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	45	%	ASTM D 638
Tensile Modulus, 50 mm/min	27500	kgf/cm <sup>2</sup>	ASTM D 638
Flexural Stress, yield, 6.4 mm	1020	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1010	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	27000	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 6.4 mm	27000	kgf/cm <sup>2</sup>	ASTM D 790
Tensile Stress, yield, 50 mm/min	67	MPa	ISO 527
Tensile Stress, break, 50 mm/min	52	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	55	%	ISO 527
Tensile Modulus, 1 mm/min	2550	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	104	MPa	ISO 178
Flexural Modulus, 2 mm/min	2420	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, notched, 23°C	17	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	10	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	560	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	12	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	5	kJ/m <sup>2</sup>	ISO 180/1A

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(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Source GMD, last updated:

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>IMPACT</b>			
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	13	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	5	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	128	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	113	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	130	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	121	°C	ASTM D 648
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/120	144	°C	ISO 306
Vicat Softening Temp, Rate B/120	134	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	111	°C	ISO 75/Af
Relative Temp Index, Elec	110	°C	UL 746B
Relative Temp Index, Mech w/impact	105	°C	UL 746B
Relative Temp Index, Mech w/o impact	110	°C	UL 746B
<b>PHYSICAL</b>			
Specific Gravity	1.1	-	ASTM D 792
Density	1.1	g/cm <sup>3</sup>	ISO 1183
Melt Volume Rate, MVR at 250°C/10.0 kg	7	cm <sup>3</sup> /10 min	ISO 1133
Melt Volume Rate, MVR at 280°C/5.0 kg	11	cm <sup>3</sup> /10 min	ISO 1133
Melt Viscosity, 250°C, 1500 sec-1	525	Pa-s	ISO 11443
Melt Viscosity, 260°C, 1500 sec-1	390	Pa-s	ISO 11443
Melt Viscosity, 280°C, 1500 sec-1	250	Pa-s	ISO 11443
<b>ELECTRICAL</b>			
Volume Resistivity	1.4E+17	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	49	kV/mm	ASTM D 149
High Voltage Arc Track Rate {PLC}	3	PLC Code	UL 746A

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>ELECTRICAL</b>			
Comparative Tracking Index	250	V	IEC 60112
<b>FLAME CHARACTERISTICS</b>			
UL Compliant, 94V-0 Flame Class Rating (3)(4)	1.5	mm	UL 94 by SABIC-IP
UL Compliant, 94-5VA Rating (3)(4)	2.5	mm	UL 94 by SABIC-IP
UL Compliant, 94-5VB Rating (3)(4)	2	mm	UL 94 by SABIC-IP
Glow Wire Flammability Index 960°C, passes at	1.5	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.5 mm	800	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.0 mm	800	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	800	°C	IEC 60695-2-13

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
<b>Injection Molding</b>		
Drying Temperature	105 - 110	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	275 - 305	°C
Nozzle Temperature	275 - 305	°C
Front - Zone 3 Temperature	265 - 305	°C
Middle - Zone 2 Temperature	255 - 300	°C
Rear - Zone 1 Temperature	245 - 295	°C
Mold Temperature	70 - 100	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	20 - 100	rpm
Shot to Cylinder Size	30 - 70	%
Vent Depth	0.038 - 0.051	mm

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