

## Noryl\* Resin PX9406

### Americas: COMMERCIAL

Nonbrominated, nonchlorinated, flame retarded. Improved productivity and reliability. 252F HDT. UL94 V-0 rated. Electrical applications.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	760	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	560	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	9.5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	18	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	1130	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	26900	kgf/cm <sup>2</sup>	ASTM D 790
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	114	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	16	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	428	cm-kgf	ASTM D 3763
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	150	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	133	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	122	°C	ASTM D 648
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	1.11	-	ASTM D 792
Water Absorption, 24 hours	0.06	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Mold Shrinkage on Tensile Bar, xflow (2)	0.5 - 0.7	%	SABIC Method
<b>ELECTRICAL</b>			
Volume Resistivity	2.E+16	Ohm-cm	ASTM D 257
Surface Resistivity	>1.E+16	Ohm	ASTM D 257

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume rate are measured on injection moulded samples. All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.

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

4) Own measurement according to UL.

Source, GMD, Last Update:

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>ELECTRICAL</b>			
Dielectric Strength, in oil, 3.2 mm	18.8	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	2.57	-	ASTM D 150
Relative Permittivity, 1 MHz	2.49	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.0052	-	ASTM D 150
Dissipation Factor, 1 MHz	0.0026	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	0	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94V-0 Flame Class Rating (3)	0.76	mm	UL 94
UV-light, water exposure/immersion	F2	-	UL 746C

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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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