

## Noryl GTX\* Resin APS8740

Americas: COMMERCIAL

Noryl\* APS8740 resin is a glass filled, high performance blend of PPE/PPS that exhibits an excellent balance of high-heat resistance, strength, flame retardant, and conductivity. This grade can be electro-statically painted or powder coated without the need for a conductive primer. The resin is injection moldable and only available in black.

### Property

TYPICAL PROPERTIES <sup>(1)</sup>			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	79	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	79	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	0.6	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	0.6	%	ASTM D 638
Tensile Modulus, 5 mm/min	16300	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	118	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	12740	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	89	MPa	ISO 527
Tensile Stress, break, 5 mm/min	89	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	0.6	%	ISO 527
Tensile Strain, break, 5 mm/min	0.6	%	ISO 527
Tensile Modulus, 1 mm/min	14990	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	0	MPa	ISO 178
Flexural Modulus, 2 mm/min	13640	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	34	J/m	ASTM D 256
Izod Impact, notched, -30°C	37	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	3	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	3	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	4	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m <sup>2</sup>	ISO 179/1eA
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	231	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	234	°C	ASTM D 648
CTE, -40°C to 40°C, flow	2.7E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	4.9E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	2.7E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	2.7E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	0	°C	ISO 306
Vicat Softening Temp, Rate B/120	233	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	231	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.62	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.3 - 0.8	%	SABIC Method
Melt Flow Rate, 300°C/5.0 kgf	16	g/10 min	ASTM D 1238
Density	1.62	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.02	%	ISO 62

Moisture Absorption (23°C / 50% RH)	0	%	ISO 62
Melt Volume Rate, MVR at 220°C/5.0 kg	0	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>	<b>Value</b>	<b>Unit</b>	<b>Standard</b>
Volume Resistivity	2.5E+04	Ohm-cm	ASTM D 257
Surface Resistivity	0.E+00	Ohm	ASTM D 257
Volume Resistivity	2.5E+04	Ohm-cm	IEC 60093
Surface Resistivity, ROA	0.E+00	Ohm	IEC 60093
Comparative Tracking Index	100	V	IEC 60112
<b>FLAME CHARACTERISTICS</b>	<b>Value</b>	<b>Unit</b>	<b>Standard</b>
UL Compliant, 94HB Flame Class Rating (3)(4)	2	mm	UL 94 by GE
UL Compliant, 94V-2 Flame Class Rating (3)(4)	0.5	mm	UL 94 by GE
UL Compliant, 94V-1 Flame Class Rating (3)(4)	0.5	mm	UL 94 by GE
UL Compliant, 94V-0 Flame Class Rating (3)(4)	2	mm	UL 94 by GE
UL Compliant, 94-5VA Rating (3)(4)	0.5	mm	UL 94 by GE
UL Compliant, 94-5VB Rating (3)(4)	0.5	mm	UL 94 by GE
UL Recognized, 94HB Flame Class Rating (3)	2	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating (3)	0.5	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating (3)	0.5	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	2	mm	UL 94

Source GMD, last updated:05/01/2007

## Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	135	°C
Drying Time	4 - 6	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	330 - 350	°C
Nozzle Temperature	330 - 350	°C
Front - Zone 3 Temperature	330 - 350	°C
Middle - Zone 2 Temperature	325 - 345	°C
Rear - Zone 1 Temperature	315 - 340	°C
Mold Temperature	120 - 150	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	40 - 70	rpm
Shot to Cylinder Size	40 - 60	%
Vent Depth	0.025 - 0.076	mm

Source GMD, last updated:05/01/2007

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

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

(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.

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