

# NORYL™ RESIN EXNLO143

REGION AMERICAS

## DESCRIPTION

NORYL PX1736 Resin is a blend of PPE and PS, that provides high strength, increased heat resistance, and translucency. The material has melt strength suitable for Extrusion and Blow Molding applications. Typical applications include High Performance Applications.

## TYPICAL PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	79	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	56	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	29	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	5.2	%	ASTM D 638
Tensile Modulus, 5 mm/min	2780	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	125	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2940	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	79	MPa	ISO 527
Tensile Stress, break, 50 mm/min	72	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.7	%	ISO 527
Tensile Strain, break, 50 mm/min	7.6	%	ISO 527
Tensile Modulus, 1 mm/min	3110	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	123	MPa	ISO 178
Flexural Modulus, 2 mm/min	2970	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, notched, 23°C	34	J/m	ASTM D 256
Izod Impact, notched, -30°C	27	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	9	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	4	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	3	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	3	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	141	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	122	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.9E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	7.9E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	N/A	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	141	°C	ISO 306
Vicat Softening Temp, Rate B/120	142	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	123	°C	ISO 75/Af
<b>PHYSICAL</b>			
Specific Gravity	1.06	-	ASTM D 792

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 300°C/5.0 kgf	25.1	g/10 min	ASTM D 1238
Density	1.06	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.25	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
Melt Volume Rate, MVR at 300°C/5.0 kg	26	cm <sup>3</sup> /10 min	ISO 1133
<b>SHEET EXTRUSION</b>			
Drying Temperature	70 – 80	°C	
Drying Time	2 – 4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0	%	
Melt Temperature	265 – 275	°C	
Barrel - Zone 1 Temperature	205 – 225	°C	
Barrel - Zone 2 Temperature	215 – 240	°C	
Barrel - Zone 3 Temperature	240 – 265	°C	
Barrel - Zone 4 Temperature	240 – 265	°C	
Adapter Temperature	240 – 265	°C	
Die Temperature	240 – 265	°C	
Roll Stack Temp - Top	105 – 120	°C	
Roll Stack Temp - Middle	105 – 120	°C	
Roll Stack Temp - Bottom	105 – 120	°C	

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