



NORYL™ Resin PKN4775F

Americas: COMMERCIAL

PPE+PS blend. Opaque. FDA compliant in limited colors. High heat. Modulus at elevated temperature. Good ESCR performance. Thin wall extrusion and injection molding. Typical applications include packaging for high performance applications.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	520	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	480	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5.1	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	35	%	ASTM D 638
Tensile Modulus, 5 mm/min	21600	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	800	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	22500	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 50 mm/min	51	MPa	ISO 527
Tensile Stress, break, 50 mm/min	47	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.2	%	ISO 527
Tensile Strain, break, 50 mm/min	29.4	%	ISO 527
Tensile Modulus, 1 mm/min	2120	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	82	MPa	ISO 178
Flexural Modulus, 2 mm/min	2160	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	27	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	16	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	404	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	20	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	11	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	19	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	142	°C	ASTM D 1525



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THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	138	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	122	°C	ASTM D 648
CTE, -40°C to 40°C, flow	9.2E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	9.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	9.2E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	9.5E-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	142	°C	ISO 306
Vicat Softening Temp, Rate B/120	144	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	122	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.05	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.8	%	SABIC Method
Melt Flow Rate, 300°C/5.0 kgf	15.3	g/10 min	ASTM D 1238
Density	1.05	g/cm ³	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	14	cm ³ /10 min	ISO 1133



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- Use lower process temperatures when material is let-down.

PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Sheet Extrusion		
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