

# NORYL™ RESIN PKN4752F

REGION AMERICAS

## DESCRIPTION

NORYL PKN4752F resin is a non-reinforced, translucent, high heat blend of polyphenylene ether (PPE) + polystyrene (PS). This extrudable and injection moldable grade is FDA food contact compliant and exhibits high heat resistance, dimensional stability, and appears translucent with a yellow tint in the natural color. NORYL PKN4752F resin is an excellent candidate for high performance packaging in food, electronics, and healthcare. \*See NORYL PKN4752 resin for NON FDA compliant version.

GENERAL INFORMATION	
Features	Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Transparent/Translucent, Food contact, Dimensional stability, High temperature resistance, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Sheet extrusion

INDUSTRY	SUB INDUSTRY
Industrial	Material Handling
Packaging	Industrial Packaging

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, yld, Type I, 50 mm/min	86	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	73	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	15	%	ASTM D638
Tensile Modulus, 50 mm/min	3000	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	144	MPa	ASTM D790
Flexural Stress, yld, 2.6 mm/min, 100 mm span	136	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3150	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	2940	MPa	ASTM D790
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, notched, 23°C	32	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	6	J	ASTM D3763
<b>THERMAL <sup>(1)</sup></b>			
Vicat Softening Temp, Rate B/50	173	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	160	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	151	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	151	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.3E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	5.58E-05	1/°C	ASTM E831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>PHYSICAL <sup>(1)</sup></b>			
Specific Gravity	1.08	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm <sup>(2)</sup>	0.6 – 0.9	%	SABIC method
<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	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) 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.

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