NORYL™ RESIN PKN4752F

REGION AMERICAS

DESCRIPTION

NORYL PKN4752F resin is a non-reinforced, translucent, high heat blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). 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.

TYPICAL PROPERTY VALUES

Revision 20190110

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	86	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	73	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	15	%	ASTM D 638
Tensile Modulus, 50 mm/min	3000	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	144	MPa	ASTM D 790
Flexural Stress, yld, 2.6 mm/min, 100 mm span	136	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	3150	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	2940	MPa	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	32	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	6	J	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	173	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	160	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	151	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	151	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.3E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	5.58E-05	1/°C	ASTM E 831
PHYSICAL			
Specific Gravity	1.08	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.6 – 0.9	%	SABIC method
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	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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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