NORYL PPX™ RESIN PPX7110

REGION AMERICAS

DESCRIPTION

NORYL PPX7110 resin is a non-reinforced alloy of polyphenylene ether (PPE) + Polypropylene (PP). This injection moldable grade exhibits high impact resistance and good heat resistance along with hydrolytic and dimensional stability. NORYL PPX7110 resin is an excellent candidate for applications requiring high impact, chemical resistance, and good heat performance.

GENERAL INFORMATION	
Features	Chemical Resistance, Hydrolytic Stability, Low Warpage, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Dimensional stability, High stiffness/Strength, High temperature resistance, Impact resistant, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyphenylene Ether + PP (PPE+PP)
Processing Techniques	Sheet extrusion, Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Water Management
Consumer	Home Appliances, Commercial Appliance
Hygiene and Healthcare	Patient Testing

TYPICAL PROPERTY VALUES

Revision 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	35	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	32	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6.5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	195	%	ASTM D638
Tensile Modulus, 50 mm/min	1340	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	51	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	1550	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched, 23°C	437	J/m	ASTM D256
Izod Impact, notched, -30°C	149	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	37	J	ASTM D3763
Instrumented Dart Impact Total Energy, -30°C	27	J	ASTM D3763
THERMAL [1]			
Vicat Softening Temp, Rate B/50	138	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	113	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	77	°C	ASTM D648
CTE, -40°C to 40°C, flow	8.1E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.12E-04	1/°C	ASTM E831
PHYSICAL [1]			

CHEMISTRY THAT MATTERS™

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Specific Gravity	0.97	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm (2)	0.8 – 1.2	%	SABIC method
Melt Flow Rate, 260°C/5.0 kgf	10.6	g/10 min	ASTM D1238
FLAME CHARACTERISTICS (3)			
UL Yellow Card Link	E121562-221229	-	-
UL Recognized, 94HB Flame Class Rating	≥1	mm	UL 94
INJECTION MOLDING (4)			
Drying Temperature	60 – 65	°C	
Drying Time	2 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	260 – 290	°C	
Nozzle Temperature	260 – 290	°C	
Front - Zone 3 Temperature	250 – 290	°C	
Middle - Zone 2 Temperature	240 – 280	°C	
Rear - Zone 1 Temperature	225 – 275	°C	
Mold Temperature	30 – 50	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 70	%	
Vent Depth	0.038 – 0.051	mm	
SHEET EXTRUSION			
Drying Temperature	60 – 65	°C	
Drying Time	2 – 4	Hrs	
Drying Time (Cumulative)	4	Hrs	
Melt Temperature	270 – 280	°C	
Barrel - Zone 1 Temperature	145 – 155	°C	
Barrel - Zone 2 Temperature	255 – 265	°C	
Barrel - Zone 3 Temperature	270 – 280	°C	
Barrel - Zone 4 Temperature	270 – 280	°C	
Adapter Temperature	265 – 270	°C	
Die Temperature	265 – 270	°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.
(3) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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