NORYL PPX™ RESIN PPX7115PF

DESCRIPTION

NORYL PPX7115PF resin is a non-reinforced alloy of polyphenylene ether (PPE) + polypropylene (PP). This FDA certified injection moldable grade exhibits high impact resistance and good heat resistance along with hydrolytic and dimensional stability. Target application of NORYL PPX7115PF is food contact water management component 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, Food contact, 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	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Water Management

TYPICAL PROPERTY VALUES

Revision 20231109

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	34	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	8	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	125	%	ASTM D638
Tensile Modulus, 50 mm/min	1240	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	51	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	1370	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	30	MPa	ISO 527
Tensile Strain, break, 50 mm/min	125	%	ISO 527
Tensile Modulus, 1 mm/min	1425	MPa	ISO 527
Flexural Strength, 2 mm/min	46	MPa	ISO 178
Flexural Modulus, 2 mm/min	1439	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	534	J/m	ASTM D256
Izod Impact, notched, -30°C	81	J/m	ASTM D256
Izod Impact, notched 80*10*4 +23°C	37	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	8	kJ/m²	ISO 180/1A
Instrumented Dart Impact Total Energy, 23°C	37	J	ASTM D3763
Instrumented Dart Impact Total Energy, -30°C	30	J	ASTM D3763
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	111	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	84	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	110	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	82	°C	ISO 75/Af
CTE, -40°C to 40°C, flow	7.8E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.3E-04	1/°C	ASTM E831
Vicat Softening Temp, Rate B/50	83	°C	ASTM D1525
Vicat Softening Temp, Rate A/50	131	°C	ISO 306
PHYSICAL (1)			
Specific Gravity	0.99	-	ASTM D792
Melt Flow Rate, 260°C/5.0 kgf	16	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 260°C/5.0 kg	14	cm³/10 min	ISO 1133
Mold Shrinkage, flow (2)	0.6 – 0.8	%	SABIC method
Mold Shrinkage, xflow (2)	0.6 – 0.8	%	SABIC method
INJECTION MOLDING (3)			
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	

(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) 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.

DISCLAIMER