NORYL PPX™ Resin PPX640

REGION ASIA

DESCRIPTION

NORYL PPX640 resin is a 40% glass fiber reinforced alloy of polyphenylene ether (PPE) + Polypropylene (PP). This injection moldable grade exhibits high stiffness along with temperature performance, impact resistance, hydrolytic stability, and dimensional stability. NORYL PPX640 resin is an excellent candidate for applications requiring a good chemical resistance and high stiffness.

GENERAL INFORMATION	
Features	Chemical Resistance, Hydrolytic Stability, Low Warpage, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Creep resistant, Dimensional stability, High stiffness/Strength, High temperature resistance, Impact resistant, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyphenylene Ether + PP (PPE+PP)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Heavy Truck
Building and Construction	Water Management
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	95	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	95	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	6.4	%	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	150	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	8310	MPa	ASTM D790
IMPACT [1]			
Izod Impact, unnotched, 23°C	576	J/m	ASTM D4812
Izod Impact, notched, 23°C	106	J/m	ASTM D256
Izod Impact, notched, -30°C	96	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	16	J	ASTM D3763
Instrumented Dart Impact Total Energy, -30°C	14	J	ASTM D3763
THERMAL [1]			
Vicat Softening Temp, Rate B/50	163	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	158	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	146	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.08E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.3E-05	1/°C	ASTM E831
PHYSICAL [1]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Specific Gravity	1.3	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm [2]	0.17 – 0.18	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm [2]	0.27 – 0.61	%	SABIC method
Melt Flow Rate, 260°C/5.0 kgf	1.3	g/10 min	ASTM D1238
INJECTION MOLDING [3]			
Drying Temperature	65 – 75	°C	
Drying Time	2 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	260 – 305	°C	
Nozzle Temperature	260 – 305	°C	
Front - Zone 3 Temperature	255 – 300	°C	
Middle - Zone 2 Temperature	250 – 290	°C	
Rear - Zone 1 Temperature	245 – 290	°C	
Mold Temperature	40 – 65	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 70	%	
Vent Depth	0.051 – 0.076	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.

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