

NORYL PPX™ RESIN PPX640

REGION AMERICAS

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

Polymer Types

Polyphenylene Ether + PP (PPE+PP)

Processing Techniques

Injection Molding

INDUSTRY

Automotive

Building and Construction

Electrical and Electronics

Industrial

SUB INDUSTRY

Heavy Truck

Water Management

Mobile Phone - Computer - Tablets

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⁾

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
FLAME CHARACTERISTICS ⁽³⁾			
UL Yellow Card Link	E121562-221228	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
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) 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.

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