NORYL PPX™ RESIN PPX7112

REGION AMERICAS

DESCRIPTION

NORYL PPX™ 7112 resin is a non-reinforced alloy of polyphenylene ether (PPE) + polypropylene (PP). This injection moldable grade exhibits high modulus, high-temperature performance, and impact resistance, hydrolytic and dimensional stability. NORYL PPX7112 resin is an excellent candidate for exterior painted automotive applications.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	34	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	33	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	8	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	120	%	ASTM D 638
Tensile Modulus, 50 mm/min	1170	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	49	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	1340	MPa	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	587	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	37	J	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	85	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	112	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	85	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.55E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.2E-05	1/°C	ASTM E 831
PHYSICAL			
Specific Gravity	0.99	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.6 – 0.7	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.6 – 0.8	%	SABIC method
Melt Flow Rate, 260°C/5.0 kgf	10.5	g/10 min	ASTM D 1238
FLAME CHARACTERISTICS (1)			
UL Yellow Card Link	E121562-221230	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING			
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	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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) 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.

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