

NORYL PPX™ PPX830 resin

Polyphenylene Ether + PS + PP

SABIC Innovative Plastics

Message:

NORYL PPX830 Polyphenylene Oxide (PPO*) + Polypropylene (PP) resin is a 30 % Glass Reinforced, injection moldable grade with a HDT /1.8MPa temperature resistance of 153 deg C and a Tensile modulus of 7600 MPa; this grade has been developed for application where dimension stability, temperature and chemical resistance could be required. NORYL PPX830 is an opaque material available in limited colors only.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Good dimensional stability		
	Good chemical resistance		
Appearance	Opacity		
	Available colors		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	6.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (280°C/5.0 kg)	6.00	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal method
Flow: 3.20mm	0.20 - 0.25	%	Internal method
Transverse flow: 3.20mm	0.40 - 0.60	%	Internal method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	7600	MPa	ASTM D638
--	7700	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	101	MPa	ASTM D638
Yield	98.0	MPa	ISO 527-2/5
Fracture ³	101	MPa	ASTM D638
Fracture	98.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	2.9	%	ASTM D638
Yield	3.2	%	ISO 527-2/5
Fracture ⁵	100	%	ASTM D638
Fracture	3.2	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁶	6600	MPa	ASTM D790

-- ⁷	7100	MPa	ISO 178
Flexural Stress			
--	141	MPa	ISO 178
Yield, 50.0mm span ⁸	144	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength ⁹			ISO 179/1eU
-30°C	36	kJ/m ²	ISO 179/1eU
23°C	39	kJ/m ²	ISO 179/1eU
Notched Izod Impact			
23°C	95	J/m	ASTM D256
23°C ¹⁰	10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	650	J/m	ASTM D4812
-30°C ¹¹	42	kJ/m ²	ISO 180/1U
23°C ¹²	42	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	10.0	J	ASTM D3763
23°C, Total Energy	15.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	166	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ¹³	168	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	156	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁴	153	°C	ISO 75-2/Af
Vicat Softening Temperature	150	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			
Flow: -40 to 95°C	2.5E-5	cm/cm/°C	ASTM E831
Flow: -30 to 80°C	2.5E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 95°C	1.3E-4	cm/cm/°C	ASTM E831
Horizontal: -30 to 80°C	1.2E-4	cm/cm/°C	ISO 11359-2
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.00 mm)	HB		UL 94
Glow Wire Flammability Index (3.00 mm)	650	°C	IEC 60695-2-12
Injection	Nominal Value	Unit	
Drying Temperature	65.0 - 75.0	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	245 - 290	°C	
Middle Temperature	250 - 290	°C	
Front Temperature	255 - 290	°C	

Nozzle Temperature	260 - 300	°C
Processing (Melt) Temp	260 - 300	°C
Mold Temperature	40.0 - 65.0	°C

NOTE

1.	5.0 mm/min
2.	Type 1, 5.0 mm/min
3.	Type 1, 5.0 mm/min
4.	Type 1, 5.0 mm/min
5.	Type 1, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4 sp=62mm
10.	80*10*4
11.	80*10*4
12.	80*10*4
13.	80*10*4 mm
14.	80*10*4 mm

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