



NORYL PPX™ Resin PPX830

Americas: COMMERCIAL

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.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	1020	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	1020	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.9	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	101	%	ASTM D 638
Tensile Modulus, 5 mm/min	77400	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1460	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	67300	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 5 mm/min	98	MPa	ISO 527
Tensile Stress, break, 5 mm/min	98	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.2	%	ISO 527
Tensile Strain, break, 5 mm/min	3.2	%	ISO 527
Tensile Modulus, 1 mm/min	7700	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	141	MPa	ISO 178
Flexural Modulus, 2 mm/min	7100	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	66	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	9	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	152	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -30°C	101	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	42	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	42	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	10	kJ/m ²	ISO 180/1A



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IMPACT			
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	39	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	36	kJ/m ²	ISO 179/1eU
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	166	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	156	°C	ASTM D 648
CTE, -40°C to 95°C, flow	2.5E-05	1/°C	ASTM E 831
CTE, -40°C to 95°C, xflow	1.3E-04	1/°C	ASTM E 831
CTE, -30°C to 80°C, flow	2.5E-05	1/°C	ISO 11359-2
CTE, -30°C to 80°C, xflow	1.2E-04	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Passes	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/120	150	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	168	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	153	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.19	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.2 - 0.25	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.4 - 0.6	%	SABIC Method
Melt Flow Rate, 280°C/5.0 kgf	6	g/10 min	ASTM D 1238
Density	1.19	g/cm ³	ISO 1183
Melt Volume Rate, MVR at 280°C/5.0 kg	6	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1	mm	UL 94
Glow Wire Flammability Index 650°C, passes at	3	mm	IEC 60695-2-12



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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	65 - 75	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	260 - 300	°C
Nozzle Temperature	260 - 300	°C
Front - Zone 3 Temperature	255 - 290	°C
Middle - Zone 2 Temperature	250 - 290	°C
Rear - Zone 1 Temperature	245 - 290	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	40 - 65	°C