

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.

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	101	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	101	MPa	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	7600	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	144	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	6600	MPa	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	650	J/m	ASTM D 4812
Izod Impact, notched, 23°C	95	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	15	J	ASTM D 3763
Instrumented Impact Total Energy, -30°C	10	J	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
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			
	Value	Unit	Standard

Specific Gravity	1.19	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.2 - 0.25	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm	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			
	Value	Unit	Standard
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

Source GMD, last updated:08/19/2008

Processing

Parameter	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

Source GMD, last updated:08/19/2008

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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