

Noryl* Resin PX6120

Americas: COMMERCIAL

Noryl PX6120 is an unfilled material with good flow, high Impact and chemical resistance against cleaners. Noryl PX6120 is developed for personal care applications.

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	48	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	44	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	2.8	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	40.8	%	ASTM D 638
Tensile Modulus, 5 mm/min	2670	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	78	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2330	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	46	MPa	ISO 527
Tensile Stress, break, 50 mm/min	39	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	2.4	%	ISO 527
Tensile Strain, break, 50 mm/min	39	%	ISO 527
Tensile Modulus, 1 mm/min	2430	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	73	MPa	ISO 178
Flexural Modulus, 2 mm/min	2260	MPa	ISO 178
IMPACT			
	Value	Unit	Standard
Izod Impact, notched, 23°C	367	J/m	ASTM D 256
Izod Impact, notched, -30°C	211	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	52	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	24	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	14	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	25	kJ/m ²	ISO 179/1eA
THERMAL			
	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	126	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	105	°C	ASTM D 648
CTE, -40°C to 40°C, flow	9.32E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	9.56E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	9.32E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	9.56E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	N/A	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	126	°C	ISO 306
Vicat Softening Temp, Rate B/120	129	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	109	°C	ISO 75/Af
PHYSICAL			
	Value	Unit	Standard
Specific Gravity	1.05	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.6 - 0.8	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm	0.6 - 0.8	%	SABIC Method
Melt Flow Rate, 280°C/5.0 kgf	11.9	g/10 min	ASTM D 1238
Density	1.05	g/cm ³	ISO 1183

Water Absorption, (23°C/sat)	0.25	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	12	cm ³ /10 min	ISO 1133

Source GMD, last updated:09/17/2004

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	105 - 110	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	275 - 305	°C
Nozzle Temperature	275 - 305	°C
Front - Zone 3 Temperature	265 - 305	°C
Middle - Zone 2 Temperature	255 - 300	°C
Rear - Zone 1 Temperature	245 - 295	°C
Mold Temperature	70 - 100	°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

Source GMD, last updated:09/17/2004

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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