



XENOY™ Resin X6320

Americas: COMMERCIAL

X6320 is a mineral filled PBT/PC resin developed for automotive painted doorhandles. Key advantages are excellent surface finish, easy processing and paint quality.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	640	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	420	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	55.8	%	ASTM D 638
Tensile Modulus, 5 mm/min	39700	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1090	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	36200	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 5 mm/min	63	MPa	ISO 527
Tensile Stress, break, 5 mm/min	43	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4.3	%	ISO 527
Tensile Strain, break, 5 mm/min	25.4	%	ISO 527
Tensile Modulus, 1 mm/min	3860	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	106	MPa	ISO 178
Flexural Modulus, 2 mm/min	3540	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	4	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	4	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	667	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	5	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	5	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m ²	ISO 179/1eA

(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.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Source GMD, last updated:





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THERMAL			
Vicat Softening Temp, Rate B/50	139	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	121	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	88	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	115	°C	ASTM D 648
CTE, -40°C to 60°C, flow	6.15E-05	1/°C	ASTM E 831
CTE, -40°C to 60°C, xflow	7.02E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	5.99E-03	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.84E-03	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	137	°C	ISO 306
Vicat Softening Temp, Rate B/120	139	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	78	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.33	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.8	%	SABIC Method
Melt Flow Rate, 250°C/5.0 kgf	20	g/10 min	ASTM D 1238
Density	1.33	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.12	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Melt Volume Rate, MVR at 250°C/5.0 kg	16	cm ³ /10 min	ISO 1133

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	110	°C
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	260 - 275	°C
Nozzle Temperature	255 - 270	°C
Front - Zone 3 Temperature	255 - 275	°C
Middle - Zone 2 Temperature	250 - 270	°C
Rear - Zone 1 Temperature	245 - 265	°C
Mold Temperature	65 - 90	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	50 - 80	rpm
Shot to Cylinder Size	50 - 80	%
Vent Depth	0.013 - 0.02	mm

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