

GELOY™ Resin XP7550 Americas: COMMERCIAL

PC/ASA. Excellent weatherability.

YPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	570	kgf/cm²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	440	kgf/cm²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	40	%	ASTM D 638
Tensile Modulus, 5 mm/min	26000	kgf/cm²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	830	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	25200	kgf/cm²	ASTM D 790
Hardness, Rockwell R	109	-	ASTM D 785
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	44	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3.8	%	ISO 527
Tensile Strain, break, 50 mm/min	37	%	ISO 527
Tensile Modulus, 1 mm/min	2550	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	74	MPa	ISO 178
Flexural Modulus, 2 mm/min	2400	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	38	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	5	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	367	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -30°C	101	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	35	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	9	kJ/m²	ISO 180/1A

Source GMD, last updated:

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(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.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.



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IMPACT			
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	40	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	105	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	104	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	89	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.2E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.9E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	7.2E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.8E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	85	<u>=</u>	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	105	°C	ISO 306
Vicat Softening Temp, Rate B/120	106	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	103	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	89	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.11	-	ASTM D 792
Mold Shrinkage on Tensile Bar, flow (2) (5)	0.5 - 0.7	%	SABIC Method
Mold Shrinkage, flow, 3.2 mm (5)	0.4 - 0.6	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 220°C/10.0 kgf	14	g/10 min	ASTM D 1238
Density	1.11	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.8	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.3	%	ISO 62
Melt Volume Rate, MVR at 260°C/5.0 kg	26	cm ³ /10 min	ISO 1133
OPTICAL			
Gloss, untextured, 60 degrees	94	-	ASTM D 523

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rpm

%

mm

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit	
Injection Molding			
Drying Temperature	90 - 100	°C	
Drying Time	3 - 4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.04	%	
Melt Temperature	255 - 270	°C	
Nozzle Temperature	240 - 255	°C	
Front - Zone 3 Temperature	245 - 260	°C	
Middle - Zone 2 Temperature	240 - 255	°C	
Rear - Zone 1 Temperature	230 - 250	°C	
Mold Temperature	55 - 70	°C	
Back Pressure	0.3 - 1	MPa	

30 - 80

40 - 80

0.038 - 0.076

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Screw Speed

Vent Depth

Shot to Cylinder Size

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