



## GELOY™ Resin XP4020R

### Asia Pacific: COMMERCIAL

ASA+PC may contain up to 20% post-industrial recycle. Excellent flow, weatherability, toughness and high heat for exterior uses.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	610	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	440	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	3.7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	36	%	ASTM D 638
Tensile Modulus, 50 mm/min	30900	kgf/cm <sup>2</sup>	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	870	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	26000	kgf/cm <sup>2</sup>	ASTM D 790
Hardness, Rockwell R	111	-	ASTM D 785
<b>IMPACT</b>			
Izod Impact, notched, 23°C	31	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	7	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	345	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -30°C	230	cm-kgf	ASTM D 3763
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	121	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	106	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	90	°C	ASTM D 648
CTE, -40°C to 40°C, flow	9.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.1E-05	1/°C	ASTM E 831
<b>PHYSICAL</b>			
Specific Gravity	1.13	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.4 - 0.6	%	SABIC Method
Melt Flow Rate, 220°C/10.0 kgf	10	g/10 min	ASTM D 1238
Melt Flow Rate, 230°C/3.8 kgf	21.6	g/10 min	ASTM D 1238

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

Source GMD, last updated:

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TYPICAL PROPERTIES¹	TYPICAL VALUE	Unit	Standard
<b>OPTICAL</b>			
Gloss, untextured, 60 degrees	98	-	ASTM D 523
<b>FLAME CHARACTERISTICS</b>			
FMVSS Burning Speed, thickness 1 mm	39	mm/min	FMVSS 302

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
<b>Injection Molding</b>		
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
Screw Speed	30 - 80	rpm
Shot to Cylinder Size	40 - 80	%
Vent Depth	0.038 - 0.076	mm

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