



GELOY™ Resin XP4034

Americas: COMMERCIAL

Available in a wide range of colors. Recommended for unpainted exterior/high heat/high impact applications.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	630	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	25	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	890	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	25600	kgf/cm ²	ASTM D 790
Hardness, Rockwell R	110	-	ASTM D 785
Tensile Stress, yield, 50 mm/min	57	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.5	%	ISO 527
Tensile Strain, break, 50 mm/min	126	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	75	MPa	ISO 178
Flexural Modulus, 2 mm/min	2500	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	32	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	8	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	483	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -30°C	311	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	33	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	7	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	32	kJ/m ²	ISO 179/1eA
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	115	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	104	°C	ASTM D 648

(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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THERMAL			
CTE, -20°C to 150°C, flow	7.2E-05	1/°C	ASTM E 831
CTE, -20°C to 150°C, xflow	7.2E-05	1/°C	ASTM E 831
Thermal Conductivity	0.25	W/m-°C	ASTM C 177
Vicat Softening Temp, Rate B/50	113	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	116	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	98	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.15	-	ASTM D 792
Water Absorption, 24 hours	0.25	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 220°C/10.0 kgf	5	g/10 min	ASTM D 1238
Melt Flow Rate, 260°C/5.0 kgf	14	g/10 min	ASTM D 1238
Melt Flow Rate, 280°C/3.8 kgf	24	g/10 min	ASTM D 1238
OPTICAL			
Gloss, untextured, 60 degrees	94	-	ASTM D 523
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.5	mm	UL 94
UV-light, water exposure/immersion	F2	-	UL 746C

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- May be used in co-extrusion or monolayer.

PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	95 - 105	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.04	%
Melt Temperature	260 - 275	°C
Nozzle Temperature	245 - 265	°C
Front - Zone 3 Temperature	250 - 265	°C
Middle - Zone 2 Temperature	245 - 260	°C
Rear - Zone 1 Temperature	240 - 255	°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
Sheet Extrusion		
Drying Temperature	90 - 100	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Minimum Moisture Content	0.04	%
Melt Temperature	260 - 280	°C
Barrel - Zone 1 Temperature	225 - 240	°C
Barrel - Zone 2 Temperature	240 - 250	°C
Barrel - Zone 3 Temperature	250 - 260	°C
Barrel - Zone 4 Temperature	260 - 270	°C
Adapter Temperature	260 - 270	°C
Die Temperature	260 - 270	°C
Roll Stack Temp - Top	100 - 120	°C
Roll Stack Temp - Middle	95 - 110	°C

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Sheet Extrusion Roll Stack Temp - Bottom	75 - 90	°C

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