



GELOY™ Resin CR7020

Americas: COMMERCIAL

ASA. Profile and sheet. Excellent weatherability, good flow/aesthetics and high impact.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	420	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	350	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	40	%	ASTM D 638
Tensile Modulus, 50 mm/min	18200	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	590	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	18200	kgf/cm ²	ASTM D 790
Hardness, Rockwell R	86	-	ASTM D 785
IMPACT			
Izod Impact, notched, 23°C	32	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	5	cm-kgf/cm	ASTM D 256
Gardner Impact (Procedure B)	1088	cm-kgf/cm	ASTM D 4226
Instrumented Impact Total Energy, 23°C	259	cm-kgf	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	99	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	87	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	76	°C	ASTM D 648
HDT, 1.82 MPa, annealed	95	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	90	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	79	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.64E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	9.18E-05	1/°C	ASTM E 831
CTE, -30°C to 0°C, flow	8.46E-05	1/°C	ASTM E 831
CTE, 0°C to 100°C, flow	9.E-05	1/°C	ASTM E 831

(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 PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
Relative Temp Index, Elec	50	°C	UL 746B
Relative Temp Index, Mech w/impact	50	°C	UL 746B
Relative Temp Index, Mech w/o impact	50	°C	UL 746B
PHYSICAL			
Specific Gravity	1.06	-	ASTM D 792
Water Absorption, equilibrium, 23C	0.55	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 220°C/10.0 kgf	7	g/10 min	ASTM D 1238
Melt Flow Rate, 260°C/5.0 kgf	13	g/10 min	ASTM D 1238
OPTICAL			
Gloss, untextured, 60 degrees	95	-	ASTM D 523
ELECTRICAL			
Surface Resistivity	>1.E+15	Ohm	ASTM D 257
Dielectric Strength, in oil, 3.2 mm	15.9	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	5.2	-	ASTM D 150
Relative Permittivity, 1 MHz	3.21	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.15	-	ASTM D 150
Dissipation Factor, 1 MHz	0.026	-	ASTM D 150
Hot Wire Ignition {PLC}	3	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.49	mm	UL 94
UV-light, water exposure/immersion	F2	-	UL 746C

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Profile Extrusion		
Drying Temperature	80 - 90	°C
Drying Time	3 - 6	hrs
Drying Time (Cumulative)	12	hrs
Minimum Moisture Content	0.02	%
Melt Temperature	225 - 255	°C
Barrel - Zone 1 Temperature	205 - 215	°C
Barrel - Zone 2 Temperature	215 - 230	°C
Barrel - Zone 3 Temperature	220 - 240	°C
Barrel - Zone 4 Temperature	225 - 245	°C
Adapter Temperature	225 - 245	°C
Die Temperature	225 - 245	°C
Calibrator Temperature	15 - 65	°C

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