

GELOY™ RESIN XP4025

REGION AMERICAS

DESCRIPTION

PC/ASA. Excellent weatherability.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	59	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	25	%	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	88	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2580	MPa	ASTM D790
Hardness, Rockwell R	114	-	ASTM D785
Tensile Stress, yield, 50 mm/min	58	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.1	%	ISO 527
Tensile Strain, break, 50 mm/min	64	%	ISO 527
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2400	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	170	J/m	ASTM D256
Izod Impact, notched, -30°C	64	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	39	J	ASTM D3763
Instrumented Dart Impact Total Energy, -30°C	33	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	21	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	6	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	37	kJ/m²	ISO 179/1eA
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	102	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	90	°C	ASTM D648
CTE, -20°C to 150°C, flow	7.2E-05	1/°C	ASTM E831
CTE, -20°C to 150°C, xflow	7.2E-05	1/°C	ASTM E831
Thermal Conductivity	0.25	W/m-°C	ASTM C177
Vicat Softening Temp, Rate B/50	109	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	107	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	93	°C	ISO 75/Af
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	1.14	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.24	%	ASTM D570

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 220°C/10.0 kgf	6.7	g/10 min	ASTM D1238
Melt Flow Rate, 260°C/5.0 kgf	18	g/10 min	ASTM D1238
Melt Flow Rate, 280°C/3.8 kgf	31	g/10 min	ASTM D1238
OPTICAL			
Gloss, untextured, 60 degrees	90	-	ASTM D523
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-220666	-	-
UL Recognized, 94HB Flame Class Rating	1.47	mm	UL 94
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	
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	255 – 270	°C	
Barrel - Zone 1 Temperature	220 – 230	°C	
Barrel - Zone 2 Temperature	230 – 245	°C	
Barrel - Zone 3 Temperature	245 – 255	°C	
Barrel - Zone 4 Temperature	255 – 265	°C	
Adapter Temperature	255 – 265	°C	
Die Temperature	255 – 265	°C	
Roll Stack Temp - Top	100 – 120	°C	
Roll Stack Temp - Middle	95 – 110	°C	
Roll Stack Temp - Bottom	75 – 90	°C	