

GELOY™ XP4034 resin

Acrylonitrile Styrene Acrylate + PC

SABIC Innovative Plastics

Message:

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

General Information			
UL YellowCard	E121562-220754		
Features	Impact resistance, high		
	Heat resistance, high		
Uses	Outdoor application		
Appearance	Available colors		
Processing Method	Sheet extrusion molding		
	Injection molding		
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)		
	Elastic Modulus vs Temperature (ASTM D4065)		
	Flexural DMA (ASTM D4065)		
	Pressure-Volume-Temperature (PVT - Zoller Method)		
	Shear DMA (ASTM D4065)		
	Specific Heat vs. Temperature (ASTM D3417)		
	Tensile Creep (ASTM D2990)		
	Tensile Fatigue		
	Tensile Stress vs. Strain (ASTM D638)		
	Thermal Conductivity vs. Temperature (ASTM E1530)		
	Viscosity vs. Shear Rate (ASTM D3835)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.15	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 kg	5.0	g/10 min	ASTM D1238
260°C/5.0 kg	14	g/10 min	ASTM D1238
280°C/3.8 kg	24	g/10 min	ASTM D1238
Molding Shrinkage			Internal method
Flow: 3.20mm	0.50 - 0.70	%	Internal method
Transverse flow: 3.20mm	0.50 - 0.70	%	Internal method
Water Absorption (24 hr)	0.25	%	ASTM D570
Outdoor Suitability	f2		UL 746C
Hardness	Nominal Value	Unit	Test Method

Rockwell Hardness (R-Scale)	110		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2500	MPa	ISO 527-2/1
Tensile Strength			
Yield ¹	62.1	MPa	ASTM D638
Yield	57.0	MPa	ISO 527-2/50
Fracture	50.0	MPa	ISO 527-2/50
Tensile Strain			
Yield	4.5	%	ISO 527-2/50
Fracture ²	25	%	ASTM D638
Fracture	130	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ³	2520	MPa	ASTM D790
-- ⁴	2500	MPa	ISO 178
Flexural Stress			
--	75.0	MPa	ISO 178
Yield, 50.0mm span ⁵	88.3	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁶ (23°C)	32	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	80	J/m	ASTM D256
23°C	320	J/m	ASTM D256
-30°C ⁷	7.0	kJ/m ²	ISO 180/1A
23°C ⁸	33	kJ/m ²	ISO 180/1A
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	30.5	J	ASTM D3763
23°C, Total Energy	47.5	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	116	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ⁹	116	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 6.40mm	104	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁰	98.0	°C	ISO 75-2/Af
Vicat Softening Temperature	113	°C	ISO 306/B50
Linear thermal expansion coefficient			ASTM E831
Flow: -20 to 150°C	7.2E-5	cm/cm/°C	ASTM E831
Lateral: -20 to 150°C	7.2E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.25	W/m/K	ASTM C177
Flammability	Nominal Value		Test Method
Flame Rating (1.50 mm)	HB		UL 94
Optical	Nominal Value		Test Method
Gardner Gloss (60°, Untextured)	94		ASTM D523

Injection	Nominal Value	Unit
Drying Temperature	93.3 - 104	°C
Drying Time	3.0 - 4.0	hr
Drying Time, Maximum	8.0	hr
Suggested Max Moisture	0.040	%
Suggested Shot Size	40 - 80	%
Rear Temperature	238 - 254	°C
Middle Temperature	243 - 260	°C
Front Temperature	249 - 266	°C
Nozzle Temperature	243 - 266	°C
Processing (Melt) Temp	260 - 277	°C
Mold Temperature	54.4 - 71.1	°C
Back Pressure	0.345 - 1.03	MPa
Screw Speed	30 - 80	rpm
Vent Depth	0.038 - 0.076	mm

Extrusion	Nominal Value	Unit
Drying Temperature	87.8 - 98.9	°C
Drying Time	3.0 - 4.0	hr
Cylinder Zone 1 Temp.	227 - 238	°C
Cylinder Zone 2 Temp.	238 - 249	°C
Cylinder Zone 3 Temp.	249 - 260	°C
Cylinder Zone 4 Temp.	260 - 271	°C
Adapter Temperature	260 - 271	°C
Melt Temperature	260 - 282	°C
Die Temperature	260 - 271	°C

Extrusion instructions

Drying Time (Cumulative): 8 hrs Minimum Moisture Content: 0.04 % Roll Stack Temp - Bottom: 74 - 91 °C Roll Stack Temp - Middle: 93 - 110 °C Roll Stack Temp - Top: 102 - 118 °C

NOTE

1. Type 1, 50mm/min
2. Type 1, 50mm/min
3. 1.3 mm/min
4. 2.0 mm/min
5. 1.3 mm/min
6. 80*10*4 sp=62mm
7. 80*10*4
8. 80*10*4
9. 80*10*4 mm
10. 80*10*4 mm

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