

GELOY™ XP4020R resin

Acrylonitrile Styrene Acrylate + PC

SABIC Innovative Plastics Asia Pacific

Message:

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

General Information			
Recycled Content	Yes,20%		
Features	Good Flow		
	Good Toughness		
	Good Weather Resistance		
	High Heat Resistance		
Uses	Outdoor Applications		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.13	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 kg	10	g/10 min	
230°C/3.8 kg	22	g/10 min	
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.60	%	Internal Method
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	111		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	3030	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	60.7	MPa	
Break	44.1	MPa	
Tensile Elongation ³			ASTM D638
Yield	3.7	%	
Break	36	%	
Flexural Modulus ⁴ (50.0 mm Span)	2550	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 50.0 mm Span)	86.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C	69	J/m	
23°C	300	J/m	
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	22.6	J	
23°C, Total Energy	33.9	J	

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.20 mm	107	°C	
1.8 MPa, Unannealed, 3.20 mm	90.0	°C	
Vicat Softening Temperature	121	°C	ASTM D1525 ⁶
CLTE			ASTM E831
Flow : -40 to 40°C	9.0E-5	cm/cm/°C	
Transverse : -40 to 40°C	8.1E-5	cm/cm/°C	
Flammability	Nominal Value	Unit	Test Method
Burning Rate (1.00 mm)	39	mm/min	ISO 3795
Optical	Nominal Value		Test Method
Gardner Gloss (60°, Untextured)	98		ASTM D523
Injection	Nominal Value	Unit	
Drying Temperature	87.8 to 98.9	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.040	%	
Suggested Shot Size	40 to 80	%	
Rear Temperature	232 to 249	°C	
Middle Temperature	238 to 254	°C	
Front Temperature	243 to 260	°C	
Nozzle Temperature	238 to 254	°C	
Processing (Melt) Temp	254 to 271	°C	
Mold Temperature	54.4 to 71.1	°C	
Back Pressure	0.345 to 1.03	MPa	
Screw Speed	30 to 80	rpm	
Vent Depth	0.038 to 0.076	mm	
NOTE			
1.	50 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	1.3 mm/min		
5.	1.3 mm/min		
6.	Rate B (120°C/h), Loading 2 (50 N)		

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