

GELOY™ XP4025 resin

Acrylonitrile Styrene Acrylate + PC

SABIC Innovative Plastics

Message:

GELOY XP4025 is a high heat modified ASA/PC blend, for automotive exterior applications. It shows very good properties, gloss and colour retention, as well as faster cycle time over competitive material.

General Information			
UL YellowCard	E45329-236513		
Additive	heat stabilizer		
Features	Gloss, Medium		
	Fast molding cycle		
	Good color stability		
	Thermal Stability		
Uses	Automotive exterior parts		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.15	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR)			ISO 1133
220°C/10.0 kg	5.00	cm ³ /10min	ISO 1133
260°C/5.0 kg	18.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ¹	0.40 - 0.60	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.70	%	ISO 62
Equilibrium, 23°C, 50% RH	0.25	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	115		ISO 2039-2
Ball Indentation Hardness (H 358/30)	98.0	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2300	MPa	ISO 527-2/1
Tensile Stress			
Yield	50.0	MPa	ISO 527-2/5
Yield	55.0	MPa	ISO 527-2/50
Fracture	40.0	MPa	ISO 527-2/5
Fracture	45.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/5, ISO 527-2/50
Yield	4.0	%	ISO 527-2/5, ISO 527-2/50
Fracture	15	%	ISO 527-2/5, ISO 527-2/50

Flexural Modulus ²	2350	MPa	ISO 178
Flexural Stress	80.0	MPa	ISO 178
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	140	mg	Internal method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ³			ISO 179/1eA
-30°C	7.0	kJ/m ²	ISO 179/1eA
23°C	14	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ⁴			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact ⁵			ISO 180/1A
-40°C	6.0	kJ/m ²	ISO 180/1A
-30°C	6.0	kJ/m ²	ISO 180/1A
-10°C	8.0	kJ/m ²	ISO 180/1A
23°C	15	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ⁶			ISO 180/1U
-30°C	No Break		ISO 180/1U
23°C	No Break		ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁷			
0.45 MPa, unannealed, 100 mm span	104	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	86.0	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	104	°C	ISO 306/B50
--	107	°C	ISO 306/B120
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 60°C	7.0E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 60°C	9.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.24	W/m/K	ISO 8302
RTI Elec	50.0	°C	UL 746
RTI Imp	50.0	°C	UL 746
RTI	50.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+16	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Strength (3.20 mm, in Oil)	27	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	4.30		IEC 60250
60 Hz	4.30		IEC 60250
1 MHz	3.00		IEC 60250

Dissipation Factor			IEC 60250
50 Hz	0.18		IEC 60250
60 Hz	0.18		IEC 60250
1 MHz	0.021		IEC 60250
Comparative Tracking Index			IEC 60112
--	225	V	IEC 60112
Solution B	225	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	HB		UL 94
3.00 mm	HB		UL 94
Oxygen Index	20	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	90.0 - 100	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.050	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	220 - 250	°C	
Middle Temperature	230 - 260	°C	
Front Temperature	240 - 270	°C	
Nozzle Temperature	230 - 260	°C	
Processing (Melt) Temp	250 - 270	°C	
Mold Temperature	50.0 - 70.0	°C	
NOTE			
1.	Tensile Bar		
2.	2.0 mm/min		
3.	80*10*4 sp=62mm		
4.	80*10*4 sp=62mm		
5.	80*10*4		
6.	80*10*4		
7.	120*10*4 mm		

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