GELOY™ XP4025 resin

Acrylonitrile Styrene Acrylate + PC

SABIC Innovative Plastics

Message:

Available in a wide range of colors and is recommended for unpainted exterior applications.

General Information	
UL YellowCard	E121562-220666
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	1.14	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 kg	6.8	g/10 min	ASTM D1238
260°C/5.0 kg	18	g/10 min	ASTM D1238
280°C/3.8 kg	31	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)	0.24	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	114		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2500	MPa	ISO 527-2/1
Tensile Strength			

Yield [1]	59.3	MPa	ASTM D638
Yield	58.0	MPa	ISO 527-2/50
Fracture	44.0	MPa	ISO 527-2/50
Tensile Strain			
Yield	4.1	%	ISO 527-2/50
Fracture [2]	25	%	ASTM D638
Fracture	64	%	ISO 527-2/50
Flexural Modulus			
50.0mm span [3]	2590	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)	37	kJ/m²	ISO 179/1eA
Notched Izod Impact			
-30°C	64	J/m	ASTM D256
23°C	170	J/m	ASTM D256
-30°C [7]	5.0	kJ/m²	ISO 180/1A
23°C [8]	21	kJ/m²	ISO 180/1A
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	33.9	J	ASTM D3763
23°C, Total Energy	39.0	J	ASTM D3763
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	103	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span [9]	107	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 6.40mm	90.6	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span [10]	93.0	°C	ISO 75-2/Af
Vicat Softening Temperature	109	°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
RTI Elec	50.0	°C	UL 746
RTI Imp	50.0	°C	UL 746
RTI	50.0	°C	UL 746
Flammability	**Nominal Value**		**Test Method**
Flame Rating (1.47 mm)	HB		UL 94
Optical	**Nominal Value**		**Test Method**
Gardner Gloss (60°, Untextured)	90		ASTM D523
Injection	**Nominal Value**	**Unit**	

Drying Temperature	87.8 - 98.9	°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	232 - 249	°C
Middle Temperature	238 - 254	°C
Front Temperature	243 - 260	°C
Nozzle Temperature	238 - 254	°C
Processing (Melt) Temp	254 - 271	°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.	221 - 232	°C
Cylinder Zone 2 Temp.	232 - 243	°C
Cylinder Zone 3 Temp.	243 - 254	°C
Cylinder Zone 4 Temp.	254 - 266	°C
Adapter Temperature	254 - 266	°C
Melt Temperature	254 - 271	°C
Die Temperature	254 - 266	°C

Extrusion instructions
Drying Time (Cumulative): 8 hrsMinimum Moisture Content: 0.04 %Roll Stack Temp - Bottom: 74 - 91 °CRoll Stack Temp - Middle: 93 - 110 °CRoll 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

Recommended distributors for this material

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