GELOY™ RESIN XP4025

REGION AMERICAS

DESCRIPTION

PC/ASA. Excellent weatherability.

TYPICAL PROPERTY VALUES

Revision 20170816

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	59	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	25	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	88	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2580	MPa	ASTM D 790
Hardness, Rockwell R	114	-	ASTM D 785
Tensile Stress, yield, 50 mm/min	58	MPa	ISO 527
Tensile Stress, break, 50 mm/min	44	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	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	75	MPa	ISO 178
Flexural Modulus, 2 mm/min	2500	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	170	J/m	ASTM D 256
Izod Impact, notched, -30°C	64	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	39	J	ASTM D 3763
Instrumented Impact Total Energy, -30°C	33	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	21	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	5	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 D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	90	°C	ASTM D 648
CTE, -20°C to 150°C, flow	7.2E-05	1/°C	ASTM E 831
CTE, -20°C to 150°C, xflow	7.2E-05	1/°C	ASTM E 831
Thermal Conductivity	0.25	W/m-°C	ASTM C177
Vicat Softening Temp, Rate B/50	109	°C	ISO 306

CHEMISTRY THAT MATTER

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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 D 792
Water Absorption, 24 hours	0.24	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm (5)	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm (5)	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 220°C/10.0 kgf	6.7	g/10 min	ASTM D 1238
Melt Flow Rate, 260°C/5.0 kgf	18	g/10 min	ASTM D 1238
Melt Flow Rate, 280°C/3.8 kgf	31	g/10 min	ASTM D 1238
OPTICAL			
Gloss, untextured, 60 degrees	90	-	ASTM D 523
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	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	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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	

DISCLAIMER

The information contained herein may include typical properties of our products or their typical performances when used in certain typical applications. Actual properties of our products, in particular when used in conjunction with any third party material(s) or for any non-typical applications, may differ from typical properties.
It is the customer's responsibility to inspect and test our product(s) in order to satisfy itself as to the suitability of the product(s) for its and its customers particular purposes. The customer is responsible for the appropriate, safe and legal use, processing and handling of all product(s) purchased from us.
Nothing herein is intended to be nor shall it constitute a warranty whatsoever, in particular, warranty of merchantability or fitness for a particular purpose.
SABIC as referred to herein means any legal entity belonging to the group of companies headed by Saudi Arabia Basic Industries Corporation.