

SABIC® STAMAX 40YM240 resin

Polypropylene

SABIC Innovative Plastics

Message:

SABIC® STAMAX 40YM240 is a 40% long glass fiber reinforced polypropylene. The glass fibers are chemically coupled to the PP matrix, resulting in high stiffness and strength. The IMDS is 16497161.

General Information			
Filler / Reinforcement	Long glass fiber, 40% filler by weight		
Features	Rigidity, high		
	High strength		
	Chemical coupling		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.21	g/cm ³	ASTM D792
--	1.22	g/cm ³	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	8470	MPa	ASTM D638
--	8300	MPa	ISO 527-2/1
80°C	5700	MPa	ISO 527-2/1
120°C	4500	MPa	ISO 527-2/1
Tensile Strength			
Fracture ²	108	MPa	ASTM D638
Fracture	121	MPa	ISO 527-2/1A/50
Fracture, 80°C	75.0	MPa	ISO 527-2/1A/50
Fracture, 120°C	54.0	MPa	ISO 527-2/1A/50
Tensile Elongation			
Fracture ³	1.8	%	ASTM D638
Fracture	2.1	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁴	7680	MPa	ASTM D790
64.0mm span ⁵	7850	MPa	ISO 178
80°C, 64.0mm span ⁶	5550	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C ⁷	28	kJ/m ²	ISO 179/1eA
23°C ⁸	22	kJ/m ²	ISO 179/1eA

Charpy Unnotched Impact Strength ⁹			ISO 179/1eU
-30°C	48	kJ/m ²	ISO 179/1eU
23°C	68	kJ/m ²	ISO 179/1eU
Notched Izod Impact ¹⁰ (23°C)	18	kJ/m ²	ISO 180/1A
Instrumented Dart Impact			
-40°C, Energy at Peak Load ¹¹	5.60	J	ASTM D3763
23°C, Energy at Peak Load ¹²	8.10	J	ASTM D3763
23°C, energy to peak power ¹³	6.60	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, unannealed, 3.20mm	158	°C	ASTM D648
1.8 MPa, not annealed ¹⁴	157	°C	ISO 75-2/A
Additional Information	Nominal Value	Unit	Test Method
Glass Fiber Content	40	%	ISO 3451
Injection	Nominal Value	Unit	
Drying Temperature	80.0 - 100	°C	
Drying Time	2.0	hr	
Rear Temperature	230 - 290	°C	
Middle Temperature	225 - 285	°C	
Front Temperature	220 - 280	°C	
Nozzle Temperature	220 - 280	°C	
Processing (Melt) Temp	220 - 280	°C	
Mold Temperature	20.0 - 80.0	°C	
Back Pressure	0.00 - 0.500	MPa	
Injection instructions			
Screw Speed: Lowest Possible			
NOTE			
1.	50 mm/min		
2.	Type 1, 50mm/min		
3.	Type 1, 50mm/min		
4.	1.3 mm/min		
5.	2.0 mm/min		
6.	2.0 mm/min		
7.	80*10*4mm, Cut		
8.	80*10*4 mm, Cut		
9.	80*10*4mm, Cut		
10.	80*10*4mm, Cut		
11.	6.60 m/sec		
12.	6.60 m/sec		
13.	6.6 m/sec		
14.	80*10*4mm, Cut		

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