



Prospector

LNP Staramide* AG3X3

SABIC Innovative Plastics Asia Pacific - Polyamide 66

Tuesday, December 02, 2008

General Information

Product Description

Impact modified, 12% glass fibre reinforced Polyamide 66 injection moulding resin.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific
Filler / Reinforcement	• Glass Fiber Reinforcement, 12% Filler by Weight
Additive	• Impact Modifier
Features	• Impact Modified
Forms	• Granules
Processing Method	• Injection Molding

ASTM and ISO Properties ¹

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity			
--	1.16	1.16	ASTM D792
--	1.16 g/cm ³	1.16 g/cm ³	ISO 1183
Molding Shrinkage - Flow	0.0050 to 0.0080 in/in	0.50 to 0.80 %	ASTM D955
Water Absorption (Saturation, 73°F (23°C))	6.5 %	6.5 %	ISO 62
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	696000 psi	4800 MPa	ISO 527-2/1
Tensile Stress (Break)	14500 psi	100.0 MPa	ISO 527-2/5
Tensile Strain (Break)	3.7 %	3.7 %	ISO 527-2/5
Flexural Modulus ²	595000 psi	4100 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	3.81 ft-lb/in ²	8.00 kJ/m ²	
73°F (23°C)	6.19 ft-lb/in ²	13.0 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	23.8 ft-lb/in ²	50.0 kJ/m ²	
73°F (23°C)	33.3 ft-lb/in ²	70.0 kJ/m ²	
Notched Izod Impact Strength			ISO 180/1A
-40°F (-40°C)	2.86 ft-lb/in ²	6.00 kJ/m ²	
-22°F (-30°C)	3.09 ft-lb/in ²	6.50 kJ/m ²	
-4°F (-20°C)	3.33 ft-lb/in ²	7.00 kJ/m ²	
73°F (23°C)	4.76 ft-lb/in ²	10.00 kJ/m ²	
Unnotched Izod Impact Strength (73°F (23°C))	30.9 ft-lb/in ²	65.0 kJ/m ²	ISO 180
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (L-Scale)	121	121	ISO 2039-2
Ball Indentation Hardness (H 358/30)	19000 psi	131 MPa	ISO 2039-1

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Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature ³ 66 psi (0.45 MPa), Unannealed, 3.94 (100) Span	468 °F	242 °C	ISO 75-2/Be
Vicat Softening Temperature	473 °F	245 °C	ISO 306/B120
CLTE Flow: 73 to 140°F (23 to 60°C) Transverse: 73 to 140°F (23 to 60°C)	0.000019 in/in/°F 0.000056 in/in/°F	0.000035 cm/cm/°C 0.000100 cm/cm/°C	ISO 11359-2
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Comparative Tracking Index	600 V	600 V	IEC 60112
Electric Strength 0.126 in (3.20 mm), in Oil	406.40 V/mil	16.00 kV/mm	IEC 60243-1
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating - UL 0.0295 in (0.750 mm) 0.118 in (3.00 mm)	HB HB	HB HB	UL 94
UL 746	Nominal Value (English)	Nominal Value (SI)	Test Method
RTI Str	149 °F	65.0 °C	UL 746
RTI Imp	149 °F	65.0 °C	UL 746
RTI Elec	149 °F	65.0 °C	UL 746

Additional Properties

Ball Pressure Test, 125 C +/- 2 C, IEC 60035-1: PASSES Comparative Tracking Index, M, IEC 60112/3rd: 600.0000 V Flexural Strength, break, 2 mm/min, ISO 178: 160.0000 MPa Moisture Absorption (23 C / 50% RH) 1L, ISO 15512: 1.3000 % Moisture Absorption, 50% RH, 24 hrs, ASTM D 570: 1.0000 % Taber Abrasion, CS-17, 1 kg, GE: 20.0000 mg/1000cy

Processing Information		
Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	167 to 185 °F	75.0 to 85.0 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Suggested Max Moisture	0.20 %	0.20 %
Hopper Temperature	140 to 176 °F	60.0 to 80.0 °C
Rear Temperature	518 to 554 °F	270 to 290 °C
Middle Temperature	500 to 536 °F	260 to 280 °C
Front Temperature	500 to 536 °F	260 to 280 °C
Nozzle Temperature	482 to 518 °F	250 to 270 °C
Processing (Melt) Temp	500 to 554 °F	260 to 290 °C
Mold Temperature	158 to 248 °F	70.0 to 120 °C

Notes

¹ Typical properties: these are not to be construed as specifications.
² 0.079 in/min (2.0 mm/min)
³ 120*10*4 mm