

Amodel® A-4160 HSL

Polyphthalamide
Solvay Specialty Polymers

Message:

Amodel A- 4160 HSL resin is a 60% glass fiber reinforced thermally stable polyphthalamide (PPA) with high elastic modulus, high thermal deformation temperature and excellent creep resistance at high temperature. It is specially developed for metal substitute materials. Rapid crystallization and good fluidity can shorten the molding cycle and improve the molding efficiency.

General Information	
UL YellowCard	E95746-101691374
Filler / Reinforcement	Glass fiber reinforced material, 60% filler by weight
Additive	heat stabilizer
	Lubricant
	demoulding
Features	Super rigidity
	Good dimensional stability
	Low CLTE
	High strength
	Fast molding cycle
	Good creep resistance
	Good chemical resistance
	Heat resistance, high
	Hot water formability
	Thermal Stability
	Good toughness
	Lubrication
Uses	Transfer application
	Electrical/Electronic Applications
	Industrial application
	Machine/mechanical parts
	Metal substitution
	Connector
	Parts under the hood of a car
	Automotive Electronics
	Application in Automobile Field
	Mobile phone
	Shell
	Camera application

RoHS Compliance	RoHS compliance		
Appearance	Black		
Forms	Particle		
Processing Method	Water temperature mold injection molding		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
Physical	Nominal Value	Unit	Test Method
Density	1.75	g/cm ³	ISO 1183/A
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.80	%	ISO 294-4
Flow direction	0.50	%	ISO 294-4
Water Absorption (23°C, 24 hr)	0.19	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ISO 527-2
23°C	23300	MPa	ISO 527-2
200°C	8770	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Fracture, 23°C	244	MPa	ISO 527-2
Fracture, 200°C	79.6	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Fracture, 23°C	1.4	%	ISO 527-2
Fracture, 200°C	3.3	%	ISO 527-2
Flexural Modulus			ISO 178
23°C	19300	MPa	ISO 178
200°C	8500	MPa	ISO 178
Flexural Stress			ISO 178
23°C	385	MPa	ISO 178
200°C	137	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	13	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	130	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	304	°C	ISO 75-2/A
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	4.0	hr	
Rear Temperature	318 - 324	°C	
Front Temperature	327 - 332	°C	
Processing (Melt) Temp	329 - 343	°C	
Mold Temperature	65.6 - 93.3	°C	
Injection instructions			
射出压力:3~4英寸/秒			

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