

NYCOA Polyamide 5100 HS

Polyamide 66

Nycoa (Nylon Corporation of America)

Message:

NYCOA 5100 HS is an impact modified, heat stabilized Nylon 66 resin used for injection molding. This material is specially formulated to provide improved flexibility and ductility vs standard Nylon 66.

NYCOA 5100 HS offers outstanding toughness, exceptional processability, and a greater service life at elevated temperatures than standard grades of Nylon 66. It is available in UV stable, and custom colors grades. It also has excellent chemical resistance

Typical applications include automotive wiring harnesses, motor component housings, gears, and electrical connectors.

General Information			
Additive	Impact modifier heat stabilizer		
Features	Impact modification		
	Workability, good		
	Good flexibility		
	Good chemical resistance		
	Hydrocarbon resistance		
	Oil resistance		
	Grease resistance		
	Thermal Stability		
	Good toughness		
	ductility		
Uses	Gear		
	Connector		
	Automotive Electronics		
	Shell		
Appearance	Available colors		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.12	g/cm ³	ASTM D792
Molding Shrinkage			ASTM D955
Flow	1.5	%	ASTM D955
Transverse flow	1.6	%	ASTM D955
Water Absorption (24 hr)	1.2	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	118		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹	65.0	MPa	ASTM D638
Tensile Elongation ² (Break)	50	%	ASTM D638
Flexural Modulus ³	2220	MPa	ASTM D790
Flexural Strength ⁴	85.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (6.35 mm)	140	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	189	°C	ASTM D648
1.8 MPa, not annealed	65.0	°C	ASTM D648
Melting Temperature	258	°C	DSC
Additional Information			
The value listed as Melting Point DSC, was tested in accordance with ASTM D789.			
Injection	Nominal Value	Unit	
Drying Temperature	71.1 - 82.2	°C	
Drying Time	4.0 - 6.0	hr	
Rear Temperature	249 - 266	°C	
Middle Temperature	266 - 277	°C	
Front Temperature	277 - 288	°C	
Nozzle Temperature	282 - 288	°C	
Processing (Melt) Temp	277 - 293	°C	
Mold Temperature	76.7 - 87.8	°C	
Injection Rate	Fast		
Back Pressure	0.138 - 0.345	MPa	
Cushion	1.59 - 6.35	mm	
Screw L/D Ratio	16.0:1.0		
Screw Compression Ratio	3.0:1.0		
NOTE			
1.	51 mm/min		
2.	51 mm/min		
3.	51 mm/min		
4.	51 mm/min		

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