

NYCOA Polyamide 5133 HS

Polyamide 66

Nycoa (Nylon Corporation of America)

Message:

NYCOA 5133 HS is a 33% glass fiber reinforced, heat stabilized, impact modified, Nylon 66 suitable for injection molding. It offers excellent balance of mechanical, thermal and chemical properties; exceptional toughness, stiffness, and dimensional stability. NYCOA 5133 HS is available in UV stable, custom colors, and impact modified grades. It also has excellent chemical resistance to greases, oils, and other hydrocarbons. Typical applications include hardware and automotive under the hood components.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 33% filler by weight		
Additive	Impact modifier heat stabilizer		
Features	Good dimensional stability Impact modification Rigid, good Good chemical resistance Hydrocarbon resistance Oil resistance Grease resistance Thermal Stability Good toughness		
Uses	Parts under the hood of a car		
Appearance	Available colors		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.35	g/cm ³	ASTM D792
Molding Shrinkage			ASTM D955
Flow	0.50	%	ASTM D955
Transverse flow	0.80	%	ASTM D955
Water Absorption (24 hr)	0.50	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	122		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹	165	MPa	ASTM D638
Tensile Elongation ² (Break)	3.0	%	ASTM D638
Flexural Modulus ³	8000	MPa	ASTM D790

Flexural Strength ⁴	230	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (6.35 mm)	210	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	260	°C	ASTM D648
1.8 MPa, not annealed	240	°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	266 - 282	°C
Middle Temperature	277 - 293	°C
Front Temperature	288 - 304	°C
Nozzle Temperature	282 - 302	°C
Processing (Melt) Temp	288 - 304	°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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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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