NYCOA Polyamide 4212 HS

Polyamide 6

Nycoa (Nylon Corporation of America)

Message:

NYCOA 4212 HS is a high viscosity resin particularly suitable for extrusion processing, thermoforming and blow molding. Its melt viscosity and strength provide ease of processing for sheet, profile, and blow molded articles.

This material is specifically engineered for applications requiring high stiffness, impact strength, dimensional stability, and a greater service life than standard grades of glass reinforced Nylon 6.

NYCOA 4212 HS is also available in UV stable grades as well as custom colors. It also has excellent chemical resistance to greases, oils, and other hydrocarbons.

Suggested applications include thermoformed under the hood automotive components and blow molded chemical storage reservoirs.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 12%	filler by weight	
Additive	Impact modifier		
	heat stabilizer		
Features	Good dimensional stability		
	Impact modification		
	Rigidity, high		
	Very high viscosity		
	Impact resistance, high		
	Workability, good		
	Good melt strength		
	Good chemical resistance		
	Hydrocarbon resistance		
	Oil resistance		
	Grease resistance		
	Thermal Stability		
Uses	Blow molding applications		
	Sheet		
	Parts under the hood of a car		
	Profile		
Appearance	Available colors		
Forms	Particle		
Processing Method	Blow molding		
	Extrusion		
	Thermoforming		
Physical	Nominal Value	Unit	Test Method

Specific Gravity	1.14	g/cm³	ASTM D792
Water Absorption (24 hr)	1.0	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	120		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹	50.0	MPa	ASTM D638
Tensile Elongation ² (Break)	42	%	ASTM D638
Flexural Modulus ³	2210	MPa	ASTM D790
Flexural Strength ⁴	55.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (6.35 mm)	260	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	190	°C	ASTM D648
1.8 MPa, not annealed	169	°C	ASTM D648
Melting Temperature	220	°C	DSC
Additional Information			
The value listed as Melting Point DSC, was te	sted in accordance with ASTM D789.		
Injection	Nominal Value	Unit	
Drying Temperature	71.1 - 82.2	°C	
Drying Time	40 60		
De su Teurs eustrum	4.0 - 0.0	hr	
Rear Temperature	238 - 249	hr °C	
Middle Temperature	238 - 249 249 - 266	hr °C °C	
Middle Temperature Front Temperature	4.0 - 0.0 238 - 249 249 - 266 260 - 271	hr °C °C	
Rear Temperature Middle Temperature Front Temperature Nozzle Temperature	4.0 - 0.0 238 - 249 249 - 266 260 - 271 260 - 277	hr °C °C °C	
Middle Temperature Front Temperature Nozzle Temperature Processing (Melt) Temp	4.0 - 0.0 238 - 249 249 - 266 260 - 271 260 - 277 254 - 271	hr °C °C °C °C °C	
Rear Temperature Middle Temperature Front Temperature Nozzle Temperature Processing (Melt) Temp Mold Temperature	4.0 - 6.0 238 - 249 249 - 266 260 - 271 260 - 277 254 - 271 65.6 - 76.7	hr °C °C °C °C °C °C	
Rear Temperature Middle Temperature Front Temperature Nozzle Temperature Processing (Melt) Temp Mold Temperature Screw L/D Ratio	4.0 - 0.0 238 - 249 249 - 266 260 - 271 260 - 277 254 - 271 65.6 - 76.7 16.0:1.0	hr °C °C °C °C °C	
Rear Temperature Middle Temperature Front Temperature Nozzle Temperature Processing (Melt) Temp Mold Temperature Screw L/D Ratio Screw Compression Ratio	4.0 - 0.0 238 - 249 249 - 266 260 - 271 260 - 277 254 - 271 65.6 - 76.7 16.0:1.0 3.0:1.0	hr °C °C °C °C	
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