NYCOA Polyamide 2176

Polyamide + TPE

Nycoa (Nylon Corporation of America)

Message:

NYCOA 2176 is a high viscosity resin particularly suitable for extrusion processing. Its high melt viscosity and extremely good melt strength provides ease of processing for tubing, complex profile, and mandrel extrusion.

NYCOA 2176 was specifically formulated to offer high flexibility and strength, superior toughness and high impact resistance, even at low temperatures. The alloy offers improved recyclability with minimum loss in physical properties after repeated extrusi

This material performs well in applications where softness, ductility and exceptional impact resistance are required.

NYCOA 2176 is available with custom additive packages: heat stabilizer, UV stabilizer and/or flame retardant.

Typical extrusion applications include hose mandrels for rubber vulcanization, high-pressure & hydraulic hoses, and flexible & vacuum tubing.

General Information			
Additive	Plasticizer		
Features	Plasticized		
	Impact resistance, good		
	Recyclable materials		
	Workability, good		
	Good strength		
	Good melt strength		
	Good flexibility		
	Low temperature impact resistance		
	Good toughness		
	Soft		
	ductility		
	Viscosity, High		
Uses	Pipe		
	Pipe fittings		
	Profile		
	Hydraulic application		
Forms	Particle		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.07	g/cm³	ASTM D792
Molding Shrinkage			ASTM D955
Flow	0.80	%	ASTM D955
Transverse flow	1.0	%	ASTM D955
Water Absorption (24 hr)	1.0	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	64		ASTM D2240

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹	44.1	MPa	ASTM D638
Tensile Elongation ² (Break)	300	%	ASTM D638
Flexural Modulus ³	634	MPa	ASTM D790
Flexural Strength ⁴	27.6	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
	No fracture		

No fracture	
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Notched Izod Impact (6.35 mm)	850 J/m		ASTM D256
Thermal	Nominal Value	Unit	Test Method
Melting Temperature	217	°C	DSC

Additional Information

Tensile Elongation at Break, ASTM D638, 2 in/min: 300+%The value listed as Melting Point DSC, was tested in accordance with ASTM D789.

Injection	Nominal Value	Unit
Drying Temperature	71.1	℃
Drying Time	4.0 - 6.0	hr
Rear Temperature	216 - 227	℃
Middle Temperature	221 - 238	℃
Front Temperature	232 - 249	℃
Nozzle Temperature	243 - 260	℃
Processing (Melt) Temp	243 - 254	°C
Mold Temperature	21.1 - 48.9	℃
Back Pressure	0.138 - 0.345	MPa
Cushion	1.59 - 6.35	mm
Screw L/D Ratio	18.0:1.0	
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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