

ExxonMobil™ AP3N

Polypropylene Impact Copolymer

Product Description

A medium impact copolymer resin designed for appliance applications requiring good stiffness and fast cycle time.

General

Features	- Fast Molding Cycle - High Gloss	- High Stiffness - Medium Flow	- Medium Impact Resistance - Nucleated
Uses	Appliance Components	Appliances	Consumer Applications
Appearance	Natural Color		
Form(s)	Pellets		
Processing Method	Injection Molding		

Physical

	Typical Value (English)	Typical Value (SI)	Test Based On
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	10 g/10 min	10 g/10 min	ASTM D1238
Density	0.9 g/cm ³	0.9 g/cm ³	ExxonMobil Method

Mechanical

	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Strength at Yield			ASTM D638
2.0 in/min (51 mm/min)	4180 psi	28.8 MPa	
Tensile Stress at Yield	4090 psi	28.2 MPa	ISO 527-2/50
Elongation at Yield (2.0 in/min (51 mm/min))	5.0 %	5.0 %	ASTM D638
Tensile Strain at Yield	5.0 %	5.0 %	ISO 527-2/50
Tensile Modulus	245000 psi	1690 MPa	ISO 527-2/1
Flexural Modulus - 1% Secant			
0.051 in/min (1.3 mm/min)	215000 psi	1480 MPa	ASTM D790A
0.51 in/min (13 mm/min)	248000 psi	1710 MPa	ASTM D790B
Flexural Modulus (0.079 in/min (2.0 mm/min))	219000 psi	1510 MPa	ISO 178

Impact

	Typical Value (English)	Typical Value (SI)	Test Based On
Notched Izod Impact (73°F (23°C))	1.8 ft-lb/in	96 J/m	ASTM D256A
Notched Izod Impact Strength			ISO 180/1A
-40°F (-40°C)	1.8 ft-lb/in ²	3.8 kJ/m ²	
0°F (-18°C)	2.2 ft-lb/in ²	4.5 kJ/m ²	
73°F (23°C)	3.9 ft-lb/in ²	8.3 kJ/m ²	
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	1.7 ft-lb/in ²	3.6 kJ/m ²	
-4°F (-20°C)	1.9 ft-lb/in ²	4.0 kJ/m ²	
32°F (0°C)	2.2 ft-lb/in ²	4.5 kJ/m ²	
73°F (23°C)	4.1 ft-lb/in ²	8.6 kJ/m ²	
Gardner Impact			ASTM D5420
-20°F (-29°C), 0.125 in (3.18 mm), Geometry GC	159 in-lb	18.0 J	



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Thermal	Typical Value (English)	Typical Value (SI)	Test Based On
Heat Deflection Temperature (1.80 MPa)	129 °F	54.0 °C	ISO 75-2/A
Heat Deflection Temperature (0.45 MPa)	212 °F	100 °C	ISO 75-2/Bf
Deflection Temperature Under Load (DTUL) at 66psi - Unannealed	237 °F	114 °C	ASTM D648
DTUL @ 66psi - Annealed	253 °F	123 °C	ASTM D648

Hardness	Typical Value (English)	Typical Value (SI)	Test Based On
Rockwell Hardness	98	98	ASTM D785

