

Exceed™ AP3N

(Legacy name: ExxonMobil™ AP3N)

Polypropylene Impact Copolymer

Product Description

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

General

Availability ¹	▪ Asia Pacific
Features	<ul style="list-style-type: none"> ▪ Fast Molding Cycle ▪ High Gloss ▪ High Stiffness ▪ Medium Flow ▪ Medium Impact Resistance ▪ Nucleated
Uses	<ul style="list-style-type: none"> ▪ Appliance Components ▪ Appliances ▪ Consumer Applications
Appearance	▪ Natural Color
Form(s)	▪ Pellets
Processing Method	▪ Injection Molding
Revision Date	▪ 03/11/2019

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	0.900 g/cm ³	0.900 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)	4150 psi	28.6 MPa	
Tensile Stress at Yield	4080 psi	28.1 MPa	ISO 527-2/50
Elongation at Yield (2.0 in/min (51 mm/min))	4.6 %	4.6 %	ASTM D638
Tensile Strain at Yield	4.7 %	4.7 %	ISO 527-2/50
Flexural Modulus - 1% Secant			
0.051 in/min (1.3 mm/min)	229000 psi	1580 MPa	ASTM D790A
0.51 in/min (13 mm/min)	259000 psi	1780 MPa	ASTM D790B
Flexural Modulus (0.079 in/min (2.0 mm/min))	228000 psi	1570 MPa	ISO 178

Impact	Typical Value (English)	Typical Value (SI)	Test Based On
Notched Izod Impact			ASTM D256A
0°F (-18°C)	0.91 ft-lb/in	49 J/m	
73°F (23°C)	2.1 ft-lb/in	110 J/m	
Notched Izod Impact Strength			ISO 180/1A
-40°F (-40°C)	1.8 ft-lb/in ²	3.8 kJ/m ²	
-4°F (-20°C)	2.2 ft-lb/in ²	4.6 kJ/m ²	
73°F (23°C)	4.5 ft-lb/in ²	9.4 kJ/m ²	
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	2.1 ft-lb/in ²	4.4 kJ/m ²	
-4°F (-20°C)	2.2 ft-lb/in ²	4.6 kJ/m ²	
32°F (0°C)	3.2 ft-lb/in ²	6.7 kJ/m ²	
73°F (23°C)	6.2 ft-lb/in ²	13 kJ/m ²	
Gardner Impact			ASTM D5420
-20°F (-29°C), 0.125 in (3.18 mm), Geometry GC	143 in-lb	16.2 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	ExxonMobil Method
Heat Deflection Temperature (0.45 MPa)			ExxonMobil Method
Flatwise	213 °F	101 °C	ExxonMobil Method
Deflection Temperature Under Load (DTUL) at 66psi - Unannealed	232 °F	111 °C	ExxonMobil Method
DTUL (66 psi) - Annealed	250 °F	121 °C	ExxonMobil Method
Hardness	Typical Value (English)	Typical Value (SI)	Test Based On
Rockwell Hardness	99	99	ASTM D785

Legal Statement

This product, including the product name, shall not be used or tested in any medical application without the prior written acknowledgement of ExxonMobil Chemical as to the intended use. For detailed Product Stewardship information, please contact Customer Service.

Contact your ExxonMobil Chemical Customer Service Representative for potential food contact application compliance (e.g. FDA, EU, HPFB).

Notes

Typical properties: these are not to be construed as specifications.

¹ Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

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