

# ExxonMobil™ AP3AW

## Polypropylene Impact Copolymer

### Product Description

An UV stabilized medium impact copolymer resin designed for automotive battery cases.

### General

Availability <sup>1</sup>	▪ Asia Pacific		
Features	▪ High Stiffness ▪ Low Warpage	▪ Medium Flow ▪ Medium Impact Resistance	▪ UV Resistant
Uses	▪ Automotive Applications	▪ Automotive Under the Hood	▪ Battery Cases
Appearance	▪ Natural Color		
Form(s)	▪ Pellets		
Processing Method	▪ Injection Molding		
Revision Date	▪ 07/01/2017		

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 <sup>3</sup>	0.900 g/cm <sup>3</sup>	ExxonMobil Method

Mechanical	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Strength at Yield 2.0 in/min (51 mm/min)	3930 psi	27.1 MPa	ASTM D638
Tensile Stress at Yield	3790 psi	26.1 MPa	ISO 527-2/50
Elongation at Yield (2.0 in/min (51 mm/min))	5.5 %	5.5 %	ASTM D638
Tensile Strain at Yield	5.7 %	5.7 %	ISO 527-2/50
Flexural Modulus - 1% Secant 0.051 in/min (1.3 mm/min)	204000 psi	1410 MPa	ASTM D790A
0.51 in/min (13 mm/min)	231000 psi	1590 MPa	ASTM D790B
Flexural Modulus (0.079 in/min (2.0 mm/min))	188000 psi	1300 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)	2.2 ft-lb/in	120 J/m	
Notched Izod Impact Strength			ISO 180/1A
-40°F (-40°C)	2.5 ft-lb/in <sup>2</sup>	5.3 kJ/m <sup>2</sup>	
-4°F (-20°C)	2.7 ft-lb/in <sup>2</sup>	5.6 kJ/m <sup>2</sup>	
73°F (23°C)	6.6 ft-lb/in <sup>2</sup>	14 kJ/m <sup>2</sup>	
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	2.0 ft-lb/in <sup>2</sup>	4.2 kJ/m <sup>2</sup>	
-4°F (-20°C)	2.1 ft-lb/in <sup>2</sup>	4.4 kJ/m <sup>2</sup>	
32°F (0°C)	3.1 ft-lb/in <sup>2</sup>	6.5 kJ/m <sup>2</sup>	
73°F (23°C)	5.6 ft-lb/in <sup>2</sup>	12 kJ/m <sup>2</sup>	
Gardner Impact			ASTM D5420
-20°F (-29°C), 0.125 in (3.18 mm), Geometry GC	156 in-lb	17.6 J	

Thermal	Typical Value (English)	Typical Value (SI)	Test Based On
Heat Deflection Temperature (1.80 MPa)	132 °F	55.8 °C	ISO 75-2/A
Heat Deflection Temperature (0.45 MPa)	197 °F	91.7 °C	ISO 75-2/Bf
Deflection Temperature Under Load (DTUL) at 66psi - Unannealed	210 °F	99.0 °C	ASTM D648
DTUL @ 66psi - Annealed	239 °F	115 °C	ASTM D648

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Hardness	Typical Value (English)	Typical Value (SI)	Test Based On
Rockwell Hardness	94	94	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.

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

For additional technical, sales and order assistance: [www.exxonmobilchemical.com/ContactUs](http://www.exxonmobilchemical.com/ContactUs)

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