

ExxonMobil™ AP3AW

Polypropylene Impact Copolymer

Product Description

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

General

Availability ¹	▪ Asia Pacific		
Features	▪ Good UV Resistance ▪ High Stiffness	▪ Low Warpage ▪ Medium Flow	▪ Medium Impact Resistance
Uses	▪ Automotive Applications	▪ Automotive Under the Hood	▪ Battery Cases
Appearance	▪ Natural Color		
Form(s)	▪ Pellets		
Processing Method	▪ Injection Molding		
Revision Date	▪ 03/01/2010		

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 2.0 in/min (51 mm/min)	3930 psi	27.1 MPa	ASTM D638
Tensile Stress at Yield	3730 psi	25.7 MPa	ISO 527-2/50
Elongation at Yield (2.0 in/min (51 mm/min))	5.6 %	5.6 %	ASTM D638
Tensile Strain at Yield	5.7 %	5.7 %	ISO 527-2/50
Tensile Modulus	218000 psi	1500 MPa	ISO 527-2/1
Flexural Modulus - 1% Secant 0.051 in/min (1.3 mm/min)	194000 psi	1340 MPa	ASTM D790A
0.51 in/min (13 mm/min)	220000 psi	1520 MPa	ASTM D790B
Flexural Modulus (0.079 in/min (2.0 mm/min))	194000 psi	1340 MPa	ISO 178

Impact	Typical Value (English)	Typical Value (SI)	Test Based On
Notched Izod Impact 0°F (-18°C)	0.66 ft-lb/in	35 J/m	ASTM D256A
73°F (23°C)	1.7 ft-lb/in	90 J/m	
Notched Izod Impact Strength -40°F (-40°C)	1.6 ft-lb/in ²	3.4 kJ/m ²	ISO 180/1A
0°F (-18°C)	2.1 ft-lb/in ²	4.5 kJ/m ²	
73°F (23°C)	4.2 ft-lb/in ²	8.8 kJ/m ²	
Charpy Notched Impact Strength -22°F (-30°C)	1.5 ft-lb/in ²	3.3 kJ/m ²	ISO 179/1eA
-4°F (-20°C)	1.9 ft-lb/in ²	3.9 kJ/m ²	
32°F (0°C)	2.4 ft-lb/in ²	4.9 kJ/m ²	
73°F (23°C)	4.7 ft-lb/in ²	9.9 kJ/m ²	
Gardner Impact -20°F (-29°C), 0.125 in (3.18 mm), Geometry GC	160 in-lb	18.1 J	ASTM D5420

ExxonMobil™ AP3AW
Polypropylene Impact Copolymer

Thermal	Typical Value (English)	Typical Value (SI)	Test Based On
Heat Deflection Temperature (1.80 MPa)	128 °F	53.4 °C	ISO 75-2/A
Heat Deflection Temperature (0.45 MPa)	199 °F	92.5 °C	ISO 75-2/Bf
Deflection Temperature Under Load (DTUL) at 66psi - Unannealed	211 °F	99.4 °C	ASTM D648
DTUL @ 66psi - Annealed	241 °F	116 °C	ASTM D648

Hardness	Typical Value (English)	Typical Value (SI)	Test Based On
Rockwell Hardness	96	96	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.

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.

For additional technical, sales and order assistance: www.exxonmobilchemical.com/ContactUs

©2015 ExxonMobil. ExxonMobil, the ExxonMobil logo, the interlocking "X" device and other product or service names used herein are trademarks of ExxonMobil, unless indicated otherwise. This document may not be distributed, displayed, copied or altered without ExxonMobil's prior written authorization. To the extent ExxonMobil authorizes distributing, displaying and/or copying of this document, the user may do so only if the document is unaltered and complete, including all of its headers, footers, disclaimers and other information. You may not copy this document to or reproduce it in whole or in part on a website. ExxonMobil does not guarantee the typical (or other) values. Any data included herein is based upon analysis of representative samples and not the actual product shipped. The information in this document relates only to the named product or materials when not in combination with any other product or materials. We based the information on data believed to be reliable on the date compiled, but we do not represent, warrant, or otherwise guarantee, expressly or impliedly, the merchantability, fitness for a particular purpose, freedom from patent infringement, suitability, accuracy, reliability, or completeness of this information or the products, materials or processes described. The user is solely responsible for all determinations regarding any use of material or product and any process in its territories of interest. We expressly disclaim liability for any loss, damage or injury directly or indirectly suffered or incurred as a result of or related to anyone using or relying on any of the information in this document. This document is not an endorsement of any non-ExxonMobil product or process, and we expressly disclaim any contrary implication. The terms "we," "our," "ExxonMobil Chemical" and "ExxonMobil" are each used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliate either directly or indirectly stewarded.

exxonmobilchemical.com