Manufacturer website: https://www.exxonmobilchemical.com/en/products/polyethylene

Product Datasheet

ExxonMobil Signature Polymers

Exceed™ AP3AW

Polypropylene Impact Copolymer

Product Description

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

General

Availability [1]	▪ 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/cm³	0.900	g/cm³	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)	3930	psi	27.1	MPa	
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/in²	5.3	kJ/m²	
-4°F (-20°C)	2.7	ft·lb/in²	5.6	kJ/m²	
73°F (23°C)	6.6	ft·lb/in²	14	kJ/m²	
Charpy Notched Impact Strength					ISO 179/1eA
-22°F (-30°C)	2.0	ft·lb/in²	4.2	kJ/m²	
-4°F (-20°C)	2.1	ft·lb/in²	4.4	kJ/m²	
32°F (0°C)	3.1	ft·lb/in²	6.5	kJ/m²	
73°F (23°C)	5.6	ft·lb/in²	12	kJ/m²	
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 (66 psi) - 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.

[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: Contact Us

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