

Design for high performing, yet appealing battery cases

Energy lives here™



Key advantages

- Enhanced product performance
- Good heat and UV resistance
- Cost reduction opportunities
- Distinct ivory appearance

ExxonMobil™ AP3AW impact copolymer (ICP) polypropylene (PP) resin is designed for high performance automotive and other battery case applications.

Enhanced product performance

ExxonMobil AP3AW is a medium melt flow rate (MFR10 g/10min) ICP PP resin providing an enhanced stiffness-impact balance, low warpage and good weldability for demanding battery case applications.

Good heat and UV resistance

The good heat and UV resistance makes it especially suitable for use at higher service temperatures and in outdoor environments for extended periods.

Cost reduction opportunities

This medium MFR ICP PP resin offers opportunities to reduce costs through improved cycle times, while reducing or eliminating flow marks for better appearance.

Distinct ivory appearance

It is formulated to have a distinct ivory appearance for natural color battery cases, making it appealing to consumers in the after-sales market.

ExxonMobil™ AP3AW ICP PP resin - thermal stability and UV stability (Xenon weathering) test properties

Properties	Test method based on	Unit	Typical value	
MFR (230°C/2.16 kg)	ASTM D1238	g/10 min	10	
Flexural modulus (2.0 mm/min)	ISO 178	MPa	1340	
Heat deflection temperature (0.45 MPa)	ISO 75-2/Bf	°C	92.5	
Gardner impact strength (-29°C, 3.2 mm, Geometry GC)	ASTM D5420	J	18.1	
Thermal stability (150°C)	ASTM D3012	Hours	456	
UV stability on natural color (1250 kJ/m ² at 340nm)	SAE J2527		As molded	After 45 days
Tensile strength at yield (50 mm/min)	ISO 527-2	MPa	26.1	26.4
Elongation at yield (50 mm/min)	ISO 527-2	%	4.6	5.7
Notched Izod impact strength (23°C)	ISO 180/1A	kJ/m ²	9.1	6.3 (69% retention)
Appearance				
Color change, ΔE	SAE J1545			2.6
60° gloss retention	ASTM D523	%		125

Value given are typical and should not be interpreted as specifications. Data generated by or on behalf of ExxonMobil Chemical.

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