




ExxonMobil™ PP Vistamaxx™ Exact™

ExxonMobil product portfolio offers flexible solutions for automotive TPO-based artificial leather

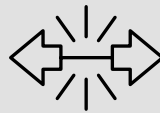
As the automotive market increasingly demands light weight components, production efficiency and products that can help enable an enhanced consumer experience, producers of artificial leather for car interiors are seeking new materials and technical innovations to help address these market needs.

Thermoplastic polyolefin (TPO)-based leather that utilizes polyolefin-based material can provide a solution that does not contain plasticizers or solvents which can help to enhance the assembling process of hot pressing polypropylene auto parts. In addition, artificial leather produced using TPO offers a lighter weight solution than other artificial leathers produced using either polyvinyl chloride (PVC) or polyurethane (PU), which can contribute to weight reductions in finished vehicles.

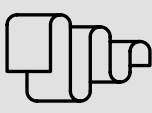
ExxonMobil offers a portfolio of products for TPO solutions including ExxonMobil™ PP, Vistamaxx™ performance polymers and Exact™ polyolefin elastomers (POE). ExxonMobil™ PP offers excellent stiffness and heat resistance, while Vistamaxx and Exact POE can help extend flexibility and elongation.



Flexible solution



Excellent elongation



Outstanding flowability

Data and results presented herein apply specifically to the noted application under this fact sheet. Your results may differ depending on factors such as operating conditions, equipment and materials used.

The blend of ExxonMobil™ PP, Vistamaxx, and Exact delivered comparable performance vs. next-best alternative for TPO leather solution

Offers flexibility:

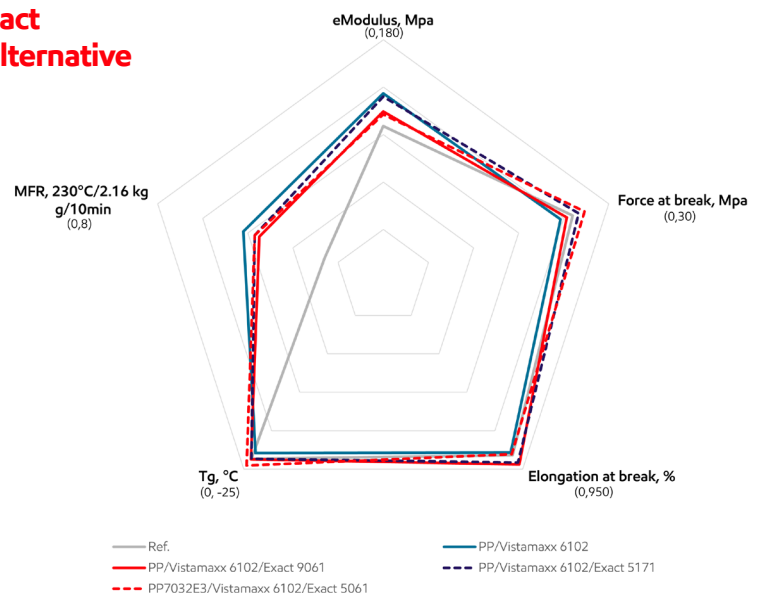
ExxonMobil's portfolio can enable tunable solutions, where products can be combined differently to meet a wide variety of flexible modulus needs.

Enables increased yield:

Extensive elongation performance can enable manufacturers to offer solutions that cover versatile auto parts such as door panels, helping enhance assembling efficiency.

Reinforce production efficiency:

Outstanding flowability can help improve processability, enabling production of a lower-torque solution with high output.



ExxonMobil product portfolio for TPO-based automotive leather

ExxonMobil™ PP

Properties	Test method based on	Units	ExxonMobil™ PP7032E3	
MFR, 230°C/2.16kg	ASTM D1238	g/10min	4.0	
Density	ExxonMobil method	g/cm ³	0.9	
Rockwell hardness	ASTM D785		84	
Flexural modulus - 1% Secant	ASTM D790A	MPa	1210	
Heat deflection temperature	ISO 75-2/Bf	°C (0.45MPa)	82.0	

Vistamaxx™ performance polymers

Properties	Test method based on	Units	Vistamaxx™ 6102	
MFR, 230°C/2.16kg	ExxonMobil method	g/10min	3.0	
Density	ExxonMobil method	g/cm ³	0.862	
Hardness	ExxonMobil method	Shore A	67	
Tensile strength at break	ExxonMobil method	MPa	>7.6	
Elongation at break	ExxonMobil method	%	>800	
Flexural modulus - 1% Secant	ExxonMobil method	MPa	14	
Vicat softening temperature	ExxonMobil method	°C	53.9	

Exact™ POE with butene comonomer

Properties	Test method based on	Units	Exact™ 9061	
Melt index, 190°C/2.16kg	ExxonMobil method	g/10min	0.50	
Density	ExxonMobil method	g/cm ³	0.863	
Hardness	ASTM D2240	Shore A	60	
Tensile strength at break	ASTM D412	MPa	2.87	
Elongation at break	ASTM D412	%	510	
Flexural modulus - 1% Secant	ASTM D790	MPa	7.98	
Vicat softening temperature	ExxonMobil method	°C	43.8	

Exact™ POE with octene comonomer

Properties	Test method based on	Units	Exact™ 5061	Exact™ 5171
MFR, 230°C/2.16kg	ASTM D1238	g/10min	0.50	1.0
Density	ASTM D1505	g/cm ³	0.868	0.868
Hardness	ExxonMobil method	Shore A	70	70
Tensile strength at break	ExxonMobil method	MPa	>10 (non-break)	>8.1 (non-break)
Elongation at break	ExxonMobil method	%	>800	>800
Flexural modulus - 1% Secant	ExxonMobil method	MPa	13	14
Vicat softening temperature	ExxonMobil method	°C	55.5	54.4

All data in this document have been tested by or on behalf of ExxonMobil

Test item	Test method
eModulus	ExxonMobil method
Force at break	ExxonMobil method
Elongation at break	ExxonMobil method
Tg	ExxonMobil method
MFR	ExxonMobil method

© 2024 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 Product Solutions" and "ExxonMobil" are each used for convenience, and may include any one or more of ExxonMobil Product Solutions Company, Exxon Mobil Corporation, or any affiliate either directly or indirectly stewarded.

Contact us for more information:

exxonmobilchemical.com/pp
exxonmobilchemical.com/en/products/polymer-modifiers

ExxonMobil