ExxonMobil

Automotive polypropylene interior surfaces that are durable, flexible and vivid to the core

Key benefits

Easy to color
Has a low talc content and high MFR for easy coloring

Lightweight & high flow
Delivers reduced density and higher flow grades while maintaining designed mechanical properties

Durable
Non-tacky, scratch resistant and UV-resistant

Low odor & emissions
Specific grades designed for interior applications to meet OEM requirements

Aesthetically outstanding
Ability to create parts offering outstanding appearance without defects

Recyclable
100% recyclable where appropriate facilities exist

Problem

As the automotive industry evolves, OEM and Tier 1 manufacturers will need to offer more customized options to stay ahead in a highly competitive market. Vehicle interiors are expected to fundamentally change as consumers seek more ways to express their own style and individuality. In the future, consumers will no longer be limited to driving due to alternative powertrains, vehicle autonomy and ridesharing. To capitalize on this trend, automotive interiors will need an infusion of color that is lightweight yet durable.

Solution

Seizing upon the opportunity, ExxonMobil™ collaborated with Clariant, a leader in additives and color masterbatches for plastics, and PVL, a renowned part manufacturer and specialist in decoration and design, to develop a polypropylene formulation that is colorable, lightweight and durable without compromising quality, or performance—Exxtral™ BMU046x[1] performance polyolefins.

Results

Exxtral™ BMU046x[1] performance polyolefins provide the best of both worlds:

High MFR and low talc content
for easier coloring

10% lower density
vs commercial P/E-TD17 for door panel grade

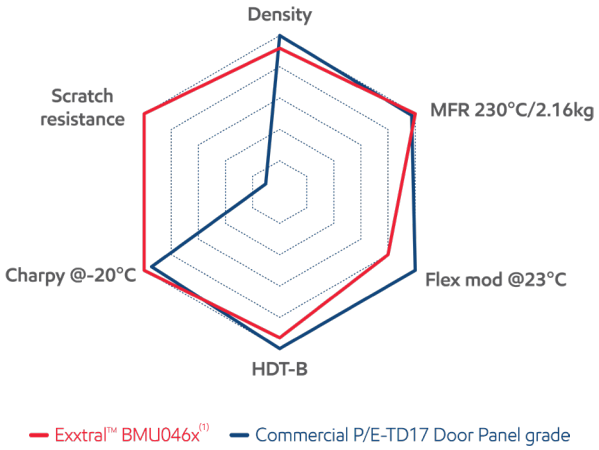
Color that moves, durability that lasts

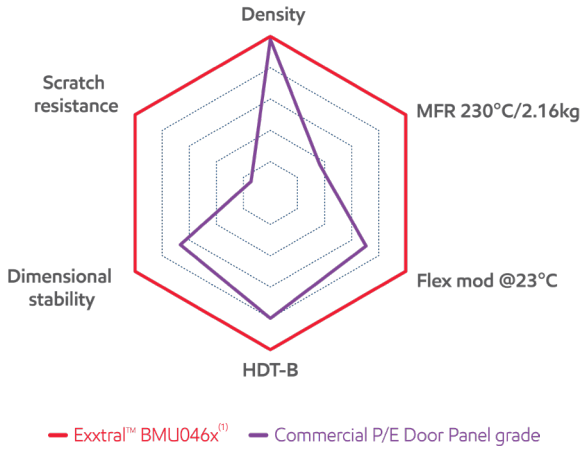
With Exxtral™ performance polyolefins, manufacturers now have unlimited flexibility in interior design and production. Colors can be easily added and customized at the masterbatch formulation level to inspire unlimited creativity with its color consistency and vibrancy. In addition, it is highly durable and remarkably easy to use on most molding machines.

Unlimited possibilities

In collaboration with Clariant and PVL, a new Color Case containing Exxtral™ performance polyolefins was created to feature 23 vivid plaques of different vibrant colors to inspire automotive designers and engineers.

Lightweight Exxtral™ BMU046x[1] suitable for door panels





Exxtral™ BMU046x[1] Has Reduced Density vs. P/E-TD17 Door Panel Grade

- 10% lower density
- Strong impact resistance
- Outstanding scratch resistance

Exxtral™ BMU046x[1] Has Lightweight Opportunity vs. P/E Door Panel Grade

- 10% lightweight opportunity
- Better dimensional stability
- Outstanding scratch resistance

Properties (on black versions)	Density	MFR 230°C /2.16kg	Flex mod @23°C	HDT-B	Charpy @-20°C	Scratch resistance @10N	Shrinkage[2]
Exxtral™ BMU046x[1]	0.940	19.4	1540	96	5.5	0.06	1.04
Commercial P/E Door Panel grade	0.910	6.8	1040	77	-	0.49	1.6
Commercial P/E-TD17 Door Panel grade	1.043	18.9	1950	103	5.1	0.68	-
Units	g/cm³	g/10mm	MPa	°C	kJ/m²	ΔL	%
Test method based on	ISO1183-1/A	ISO1133	ISO178/A	ISO 75-1/ ISO 75-2	ISO 179-1/ 1eA	D451010/C (213124)	EM Internal method

[1] Grade under development, last letter x to be defined.
[2] These are shrink estimates based on lab data or experience. Actual part shrink has to be verified by customer before cutting tools.

Data from studies 8601, 8397, 8226, 8279, 8465

Contact us for more information:
exxonmobilchemical.com/exxtral

ExxonMobil