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 flow for easy coloring

Lightweight
Delivers reduced density while maintaining designed mechanical properties

Durable
Non-tacky, scratch resistant and UV-resistant

Low odor & emissions
Specific grades designed for interior and under the hood applications to meet OEM requirements

Aesthetically outstanding
Ability to create parts offering outstanding appearance without defects

Recyclable
100% recyclable where programs and facilities exist that collect and recycle PP automotive parts

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 Avient, a leader in additives and color masterbatches for plastics, to develop polypropylene formulations that are colorable, lightweight and durable without compromising quality, or performance—Exxtral BMU041A, Exxtral BMU046A and Exxtral BMU146F performance polyolefins.

Results

Exxtral BMU041A, Exxtral BMU046A and Exxtral BMU146F performance polyolefins provide the best of both worlds:

High flow and low talc content for easier coloring

Up to 11% lower density with Exxtral BMU041A vs commercial P/E-TD17 for door panel grade

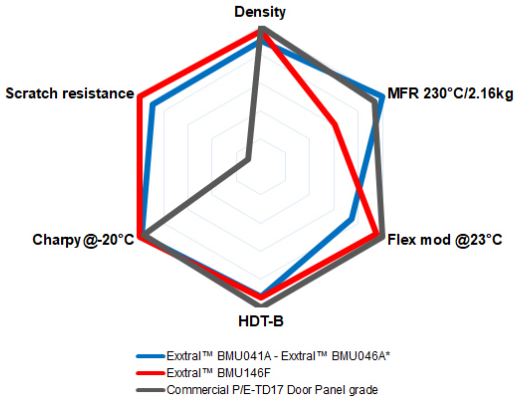
Color that moves, durability that lasts

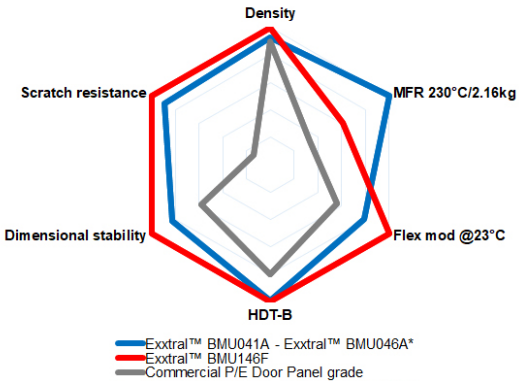
With Exxtral™ performance polyolefins, manufacturers now have unlimited flexibility in interior design and production. Colors can be easily added and customized at the masterbatch formulation level to inspire unlimited creativity with its color consistency and vibrancy. In addition, it is highly durable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

Unlimited possibilities

In collaboration with Avient 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 BMU046A, Exxtral BMU041A and Exxtral BMU146F are suitable for door panels





Exxtral BMU041A and Exxtral BMU046A have reduced density vs. P/E-TD17 door panel grade

- 3% lower density for Exxtral BMU146F (vs. Ref), up to 11% for Exxtral BMU041A*
- Excellent scratch resistance
- Easy colorability, even with 16% talc content

Exxtral BMU041A and Exxtral BMU046A have lightweight opportunity vs. P/E door panel grade

- 6% lightweight opportunity for Exxtral BMU046A, up to 9% for Exxtral BMU041A*
- Better dimensional stability
- Excellent scratch resistance

* Average of the two grades

Properties (on black versions)	Density	MFR 230°C /2.16kg	Flex mod @23°C	HDT-B	Charpy @-20°C	Scratch resistance @10N	Shrinkage[1]
Exxtral BMU041A	0.931	20.9	1520	96	4.9	0.09	1.2
Exxtral BMU046A	0.942	19.5	1400	95	5.5	-0.11	1.0
Exxtral BMU146F	1.014	12.3	1850	96	5.3	0.00	0.9
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] These are shrink estimates based on lab data or experience. Actual part shrink has to be verified by customer before cutting tools.
[2] Data from studies #8226, 8279, 8465, 8601, 8959, 9005, 9019, 9050, 9094, 9242

Contact us for more information:
exxonmobilchemical.com/exxtral

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Information correct as October 1, 2021. To confirm current status, please contact your ExxonMobil Chemical representative.