

Boosting Style, Reducing Cost

OnColor™ FX Smartbatch™ adds metallic style and improves cost performance of exterior automotive trim.

Situation

A well-known and top-ranking automotive supplier with multiple locations in Germany and sites in China and the U.S. supplies molded parts and subassemblies to a top global automotive OEM. PolyOne provides specialty materials to this automotive supplier, whose OEM customer manufactures highly engineered performance vehicles. This ongoing relationship, in which PolyOne often collaborates with the supplier, produced a cost-effective solution to a challenge regarding decorative trim molded from ABS.

Exterior trim pieces are typically injection molded, then painted to impart a metallic appearance. These conventionally produced parts can require up to eight additional production steps:

- Molding parts with low internal stress and a class A surface
- Cleaning/degreasing parts
- Priming
- Drying (maximum temperature 70°C)
- Painting
- Drying (maximum temperature 70°C)
- Clear coating
- Drying (maximum temperature 70°C)

The supplier sought to cut down the number of steps to save time and cost, but also wanted to maintain a high-quality appearance and resistance to UV radiation.

The PolyOne Difference

Working in close cooperation with the supplier, PolyOne sales and technical professionals identified a product within the OnColor FX Smartbatch portfolio as an excellent solution. Replacing the entire traditional painting process with this additive helped the customer to save time, reduce costs, and increase capacity while completely eliminating VOC emissions from painting. These emissions must be recovered to protect the environment, adding more cost to the process.

Using a metallic effect masterbatch proved to be a highly efficient solution for the supplier, who has made the switch to OnColor FX Smartbatch color and additive concentrates for trim components used on two separate vehicles.

According to the customer, they are achieving exceptional results because the concentrate provides an outstanding finish that satisfies both the OEM and vehicle owners.



In addition to the metallic special effect, the concentrates provide UV resistance for color that won't fade. In one product, OnColor FX Smartbatch concentrates combine color, metallic special effects and UV protection for exterior parts. This triple-action concentrate avoids costly and time-consuming secondary painting.

Delivering a Value-Added Solution

- Overall **improvement in material cost** performance versus painted ABS. Total savings varies, and depends on color, resin, equipment, and other processing factors.
- Masterbatch technology offers both cost and **flexibility advantages** over pre-colored compounds.
- Molders who typically use pre-colored compounds can **make the switch** to masterbatch technology without a large capital investment. In addition, the equipment costs show a quick return on investment (ROI) because of the added material savings.
- Greater flexibility and **inventory savings** offer further cost rewards. Rather than stocking several pre-colored materials, masterbatches enable molders to purchase and store natural resin that can become whatever color is required when combined with the proper masterbatch.

Product choices often vary by region due to differences in regulatory and agency requirements, availability and other key factors. Please contact your nearest sales office for assistance in choosing the right solution for your locale.

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