



APPLIANCE

# LAUNDRY APPLIANCE MAKER SHINES WITH THE LOOK OF METAL

*PolyOne*

**CASE STUDY: GEON™ FX METAL**



## MANUFACTURER ACHIEVES GREATER DESIGN FREEDOM, AN ENGAGING CONSUMER LOOK, AND SAVES \$500,000

### THE CHALLENGE

As a major global appliance manufacturer prepared to make consoles for a new line of laundry machines, its product team was at an impasse.

Marketers said that consumers demanded clean designs in bold metallic colors. But the engineers said that manufacturing options for those specs were limited to three processes, all of which came with significant drawbacks.

They could use metal, but it would restrict design freedom and show dents and scratches. They could use chrome-plated or painted plastic, but those operations require costly extra steps and come with associated environmental challenges. They could mold parts from metallic colored polymers, but molding highly pigmented polymers accentuates unsightly weld lines, where two or more material flow fronts collide in the mold.

The team needed a breakthrough approach that would deliver the bold, metallic colors and attractive designs that consumers desired, with the cost efficiency and environmental friendliness that the company needed.

### THE SOLUTION

The team found an answer after taking a look at samples of a metallic colored, rigid vinyl material from PolyOne. Leveraging experience with metallic color in a wide range of markets, PolyOne's technicians provided a specific formulation and colors that met the manufacturer's exacting requirements.

But what about the weld lines? If these lines showed up on the front of the console, they would ruin the quality aesthetic the team was seeking.

Close cooperation between the manufacturer and PolyOne's design group solved this issue by optimizing the part's geometry as well as the mold flow gating system within the mold. Using computer design and simulation analysis, combined with years of experience in configuring vinyl parts, the PolyOne team suggested changes to the tooling that strategically positioned the weld lines to an area not readily visible to consumers.

### THE IMPACT

Switching to Geon™ FX Metal pre-colored, rigid vinyl enabled the appliance manufacturer to meet its goal of producing an attractive line of laundry machines in bold, metallic colors while reducing costs—by more than \$500,000 a year.

- Eliminating secondary painting saved \$500,000 a year in manufacturing costs and \$10,000 a year in scrap reduction
- Opting for molded-in color saved \$50,000 in added costs when shipping parts from the molder to the painting facility
- Foregoing painting also reduced the environmental impact of VOC emissions
- Additional savings are expected thanks to fewer returns due to surface scratches and mars because the molded-in color extends through the console walls, helping to maintain appearance during shipping, handling and normal use

**To learn more about Geon™ FX Metal rigid vinyl, contact PolyOne at +1 866-POLYONE (1-866-765-9663) or visit [www.polyone.com](http://www.polyone.com)**