

PolyOne Boosts Manufacturing Efficiency for Pulmonary Device

Collaborative solution doubles productivity and improves yield rates, saving more than \$100,000 annually in manufacturing costs.

Situation

A leading medical contract manufacturer was experiencing processing issues with a pulmonary device housing. The specifications called for two clear resins to be blended at the press. During manufacturing, the blended resins exhibited warpage, causing an uneven surface in a substantial number of parts produced. Without a consistently flat surface, the manufacturer encountered a variety of issues involving both the form and function of the part, which contributed significantly to the number of rejected parts.



PolyOne Distribution was already working with this manufacturer on other projects, and offered assistance in identifying a solution that would reduce warpage and improve productivity.

The PolyOne Difference

The PolyOne team evaluated the existing materials and found that the required blending and drying processes created inefficiencies. Working together with the manufacturer, the team identified an alternative material that did not require blending but combined toughness, clarity, strength and impact resistance to meet the performance requirements. The formulation could also be sterilized by EtO (ethylene oxide) and gamma radiation, and offered USP Class VI and RoHS compliance to accelerate approvals and time to market.



PolyOne's team helped the manufacturer test the proposed solution and validate its superior molding and processing performance. Testing showed the new solution offered significant improvements in productivity, reduced warpage and thereby scrap, and also provided a reduction in required drying time.

Delivering a Value-Added Solution

Switching from two blended resins to a single material delivered several benefits to the manufacturer, improving production efficiencies and reducing manufacturing costs:

- Increased productivity: The PolyOne solution enabled the manufacturer to more than double its output via tooling and cycle time improvements
- Improved yield rates: Changing from a blended solution to a single material reduced scrap rate by 50 percent
- Reduced drying time: Alternative material reduced drying time by 70 percent
- Total manufacturing cost savings: Together, improved productivity, reduced scrap rates and shorter drying time contributed over \$100,000 annually in savings to the manufacturer.

PolyOne offers specialized material solutions and services targeted at helping customers meet performance and productivity goals, increase profitability, and maximize value in every possible way.

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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