



Specialty Solution from PolyOne Boosts Productivity for Medical Hose Manufacturer

Versalloy™ material reduces costs with lower specific gravity, higher flow than competitive TPV

Situation

A leading North American manufacturer of polypropylene (PP) hose for medical applications, including laser surgery, respiratory care and sleep apnea equipment, faced a challenge with its existing thermoplastic vulcanizate (TPV). The elastomeric material, used to overmold a cuff on the end of the hose, demonstrated inconsistent quality and subpar flow properties. In addition, the TPV supplier was not providing sufficient quantities of the material consistently, threatening the manufacturer's ability to meet its own customer's needs on time.

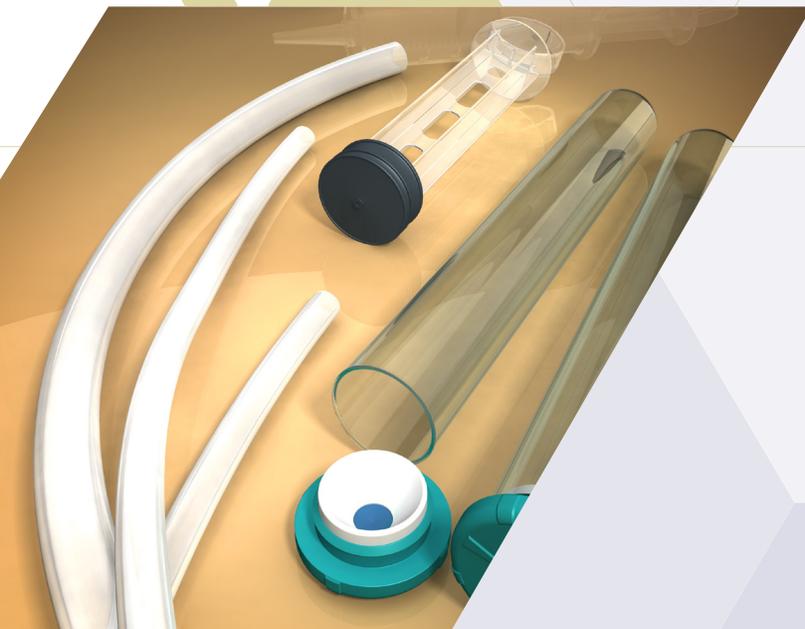
The hose manufacturer decided to explore other material options that would meet requirements such as excellent colorability, good surface appearance, high flow for optimal productivity, and of course, compliance with U.S. Food and Drug Administration (FDA) regulations. The company also sought a vendor who could provide rapid delivery and reliable material supply to avoid production delays.

The PolyOne Difference

In the course of their research into material options, the manufacturer's team invited PolyOne to suggest options for an alternative TPV based on its global reputation for superior products and service. The PolyOne team assessed the application's technical and operational requirements, and recommended GLS Versalloy XL-9045-1 alloy in 45 Shore A durometer, an FDA-compliant medical TPV grade designed for overmolding onto PP.

In addition to its excellent colorability and high flow, the Versalloy solution possessed a lower specific gravity and resulted in lower scrap rates compared to the competitive TPV, providing the opportunity to reduce system costs.

As a result of the system-based cost savings and improved supply reliability, the manufacturer made the decision to proceed with the PolyOne solution. Currently, the Versalloy TPV is used in the manufacture of end cuffs for a variety of repeated-use surgical and respiratory hoses.



Delivering a Value-Added Solution

PolyOne's expertise in materials for medical device applications helped this customer make a smooth transition to the GLS TPV.

Cost savings: The hose manufacturer is saving \$33,000 per year by using Versalloy TPV instead of its previous material. These savings resulted from lower specific gravity of the PolyOne material (0.88 compared to 0.95) and a 50% reduction in scrap rate.

Higher productivity: The improved flow properties of the Versalloy solution enabled the hose manufacturer to increase throughput by two seconds, which in turn reduced total system costs.

Reliable JIT supply chain: The Versalloy material needed by the customer was reliably supplied by PolyOne in just three weeks instead of the six week lead time offered by the competitive TPV material supplier.

PolyOne offers specialized solutions such as Versalloy™ that are targeted at helping customers meet performance and productivity goals, increase profitability, and maximize value in every way possible.

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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