Clever Material Selection Extends Operating Life of Bottling Equipment

A partnership with TriStar gives you a competitive edge.

Today's beverage packaging technology runs from traditional plastic and glass bottles, to aluminum cans (and the latest trend, pouches). The machinery involved is varied in terms of technology but the end result is the same: Hundreds of containers per minute, 24-7, to meet our insatiable need for liquid refreshment!

One of TriStar's long-time customers came to us with a problem on a filler/rinse machine for a bottling line. As the plastic bottles move from the blow molder to the production line, they must first go through a rinse line to be sure the interior of the bottle is clear of any debris.

One part that failed regularly was a gripper that grabs the neck of the bottle during the water injection rinse cycle.

One Simple (but Critical) Part Failing Resulted in Big Problems for Bottlers

Historically these were made from inexpensive materials like acetal or HDPE but over time they would fatigue from flexing and lose their ability to grip.

Chemical attack from cleaning solutions would also lead to a breakdown in strength. The customer needed something that could stand up to this function of opening/closing over the neck while being able to withstand the CIP/SIP solutions now used in the industry.

Careful Material Selection Solved the Issue and Led to Increased Throughput

TriStar engineers looked at how to meet these requirements and developed an injection moldable part using a ketone-based composite that had excellent flex fatigue resistance and other mechanical advantages along with chemical and temperature resistance.

The parts now perform with much longer life and are not affected by the latest generation of cleaning products.

Grab a copy of our free Food and Beverage guide if you would like to learn more about our options for the insutry.

We're ready to put our engineering expertise to work for you from prototype to production.

Engineering | Custom Fabrication | Manufacturing

CJ Composite

- Self-Lubricating
- Low weight | High Strength
- Chemical Resistance
- Direct replacement for Bronze

Ultracomp®

- Self-Lubricating
- High Load | Low Speed
- 54,400 PSI Compressive Strength
- Exceptional Resistance to Vibration and Impact

TriSteel™

- Self-Lubricating
- High Load | High Speed
- Metal Backed Bearing System
- 100% Lead Free

Rulon®

- Self-Lubricating
- Low weight | High Strength
- Low Coefficient of Friction
- Chemically Resistant

Enhanced Materials Division

- Plasma Surface Treatment
- Asymmetric & Symmetric Filtration Membranes
- Specialized Primers & Coatings
- Material ID & Selection

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