Case Study: PS-SEAL® with GYLON® Style 3504
Food & Beverage

INDUSTRY
Food & Beverage

BACKGROUND
The customer is a major global confectionery group that produces leading consumer branded products, with a focus on quality and customer satisfaction, and facilities all over the globe. This customer's facility in Europe processes chocolate and cream filled snacks. The maintenance team struggled to keep up with running the screw pumps for raw materials transportation of chocolate and cream. They used traditional packings to seal the shafts, but these had to be replaced on a weekly basis.

CHALLENGES FACED
Chocolate and cream are extremely demanding on rotating shafts due to their tendency to crystalize on the pump shafts. Combined with the abrasion of sugar and chocolate particles, this causes fast and heavy wear of the packings, reducing process line production time due to frequent seal replacements. Due to the high wear, there is the risk of contamination of the batch.

OPERATING CONDITIONS
Temperature: 40 - 50°C (104-131°F)
Pressure: up to 6 bar (87 psi)
Produced Media: Chocolate and Cream (no CIP/SIP)

SOLUTION AND BENEFITS
Through in-depth discussion and collaboration with the customer's engineering team, it was determined that the best solution was to replace the packings by a state of the art shaft seal solution. They chose the Garlock PS-SEAL® with GYLON® Style 3504 lip material. This would support the required level of compliance to industry standards, and the modified PTFE structure would provide the elasticity and low friction properties to sustain the conditions.

As a result, the PS-SEAL® has significantly decreased the maintenance cycles, from every 5 days to every 4 months. After this outstanding improvement, the Garlock PS-SEAL® solution was implemented in all pumps and has been specified as the standard solution for the customer.

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03.2023