

Case Study: Pharmaceutical APIs GYLON® Style 3545 Gasket



INDUSTRY

Pharmaceutical – Active Ingredients (APIs)

CUSTOMER

One of the world's largest pharmaceutical companies, with truly global activity in both R&D and manufacturing.

BACKGROUND

The customer was facing ongoing problems with reliable sealing of glass-lined reactor vessels and PTFE-lined pipework in one of its Active Pharmaceutical Ingredient (API) facilities. The existing PTFE Envelope gaskets were failing prematurely on both manhole covers and standard flange applications, causing intermittent leaks which compromised batch integrity and reduced manufacturing efficiency.

CHALLENGES FACED

As one of the major manufacturers of critical APIs in the customer's global network, the challenge was not just about offering a technically suitable product that provided improved reliability and uptime. Compliance to industry standards was critical, as was the need for accurate documentation. Finally, due to significant plant expansion, the need for excellent customer service and very short lead times was essential to support the customer during qualification, ramp-up and ongoing production.

OPERATING CONDITIONS

1. Media (process): Solvent + Organic Chemicals
2. Media (cleaning): DI water, Methanol, Methylene chloride
3. Size (pipe): 2" PTFE Lined Pipe
4. Size (vessels): various up to 40" glass-lined
5. Temperature: 212 °F (100°C)
6. Pressure: 10 bar

SOLUTION AND BENEFITS

Thanks to ongoing collaboration with the customer, and with Garlock's deep understanding of the challenges presented with sealing glass-lined vessels, it was determined that the best solution was to implement GYLON® 3545 gaskets as standard.

The soft, compressible outer PTFE layers ensured an effective seal on pitted, warped or wavy surfaces typically encountered on non-metallic flanges. The rigid PTFE inner core helped to maintain a robust seal over time, and also provided the customer with much easier handling & installation compared to envelope gaskets. Cutting the Gylon 3545 gaskets from single sheet also enabled fully flexible supply rather than bespoke dimensions, and allowed Garlock to satisfy very short turnaround times which would have otherwise resulted in un-scheduled (and expensive) plant downtime.

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