

James Walker® High Performance Elastomers

We offer James Walker's Elast-O-Pure® High Performance Elastomers, specifically designed for the biopharmaceutical industry. They possess significantly enhanced properties in comparison to other compounds, creating two market leading products – hygienic clamp gaskets and O-rings.

Hygienic Clamp Gaskets and O-Rings

The Elast-O-Pure range of materials has been developed from first principles to meet the specific requirements of the bioprocessing sector. int2 Solutions is proud to offer two materials from James Walker - Elast-O-Pure® EP75 and Elast-O-Pure® GF75 Black.

Elast-O-Pure EP75 Black ethylene-propylene-diene elastomer was developed to meet the stringent requirements of the pharmaceutical and bioprocessing sectors. It offers 50% lower Total Organic Carbon (TOC) extractables than typical EPDMs used in this application, thereby minimizing potential product contamination.

Elast-O-Pure GF75 Black is a fluorocarbon elastomer that provides excellent resistance to steam and strong mineral acids and exhibits very low Total Organic Carbon (TOC) levels.



Features and Benefits

- Class leading performance with regard to extractables; independently tested TOC values significantly lower than comparative materials.
- Very low compression set, ideally suited for the manufacture of 'O' rings, hygienic clamp fitting seals and other items where long-term retention of sealing forces is required.
- Excellent resistance to steam sterilization – ideal for Sterilized-In-Place (SIP) processes.
- Excellent chemical resistance, including acid and alkaline cleaners used in Clean-In-Place (CIP) systems.
- Excellent release properties from stainless steel after prolonged contact at elevated temperatures.
- Available as 'O' rings, custom moldings, sheet, and precision cut gaskets.

Background

The ASME BPE-2007 Standard specifies performance requirements for hygienic seals. It is expected that future revisions of the Standard will recommend evaluation of seals after steam cycles. This report details the studies of James Walker EP75B seals after 100 and 500 steam cycles.

Test Method

Ten (10) samples of each size seal were assembled into a sample block consisting of ASME-BPE compliant fittings connected with Advanced Couplings SH-Type clamps tightened to 30-inlbs. Each sample block was pressure tested at 45 PSIG for 1 hour with the criteria of no more than 0.5 psig loss. The sample block was then exposed to steam cycles of 1 hour at 130oC followed by a cool down to less than 25 oC with clean dry air. After the required number of cycles the sample block was again tested at 45 PSIG for 1 hour. Add information was recorded per Integra test protocol ENG-303-TP – Rev.00. After steam exposure, sample blocks were sent to James Walker for analysis. Intrusion was measured on all samples as well as visual inspection for tears, cracks and other deformation.

Results

Analysis of all samples post steam exposure showed no cracks, tears or other deformation. All seals removed cleanly from the ferules with minimal adhesion.



Reach out to the int2 Solutions team for a full report including data analysis.

Let int2 connect you!



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