

DuPont™ Kalrez® Spectrum™ 7090 Perfluoroelastomer Parts

O-rings for glass tube manufacturing

The process to manufacture pharmaceutical glass container tubes starts with long glass tubes which are heated, bended, and cut through with specialized equipment. Due to its high thermal conductivity, metal can damage the glass at high temperatures. To avoid damage during manufacturing when the tubes are rotated by a stainless steel wheel, an O-ring is used on the outside to avoid direct contact between the steel wheel and the glass tube.

- **Chemicals and cleaning:** Hot air
- **Process conditions:** Max. 230 °C
- **Incumbent solution:** Silicone O-rings
- **Performance challenge:** Insufficient lifetime (max. 1 week) due to thermal degradation. The O-rings leave marks on the glass.
➔ Rejection of the tubes

Kalrez® Spectrum™ 7090 benefits:

- Kalrez® Spectrum™ 7090 seal allowed to extend the MTBR (Mean Time Between Repair) to more than six months.
- This high temperature resistant material significantly reduced downtime driven by frequent part replacement. The use of Kalrez® parts also reduced scrap by minimizing reject material in the customer's production line which also boosted plant yield.



The performance is based on tests performed by the customer. Since conditions of use are outside DuPont's control, DuPont assumes no liability in connection with any use of this information. This data should not be used to establish specification limits.

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