

DuPont™ Kalrez® Spectrum™ 7375 Perfluoroelastomer Parts for Mechanical Seals in a Chemical Reactor

Chemical reactors are highly reliable systems that use chemical reaction to transform raw materials into new products. As these raw materials are often very aggressive and because of the continuous rotation of the stirrer, the use of mechanical seals is set as the preferred option. The selection of the right material for the O-Rings installed in the mechanical seal is highly decisive to ensure reliability and process safety. Kalrez® Spectrum™ 7375 O-Rings have proven their high efficiency compared with competitive FFKM.

- **Chemicals:** Various fluids (customer confidential) including water
- **Process conditions:** 200 °C, 4 bar
- **Incumbent solution:** Competitive FFKM
- **Incumbent performance:** Insufficient lifetime due to severe chemical attack

Kalrez® Spectrum™ 7375 performance:

- Kalrez® Spectrum™ 7375 O-Ring outperforms competitive FFKM seal by **extending its lifetime** from 1 year to at least 2.5 years.
- The cleaning process has become much more demanding over the years. Starting from an annual maintenance, the reactor is now cleaned 3 times per year (the current competitive FFKM O-Rings would require a change **every 6 months**).
- After a long-term testing phase, the end user is highly satisfied by the solution and recognizes all the efforts to remain focused on finding a suitable solution.

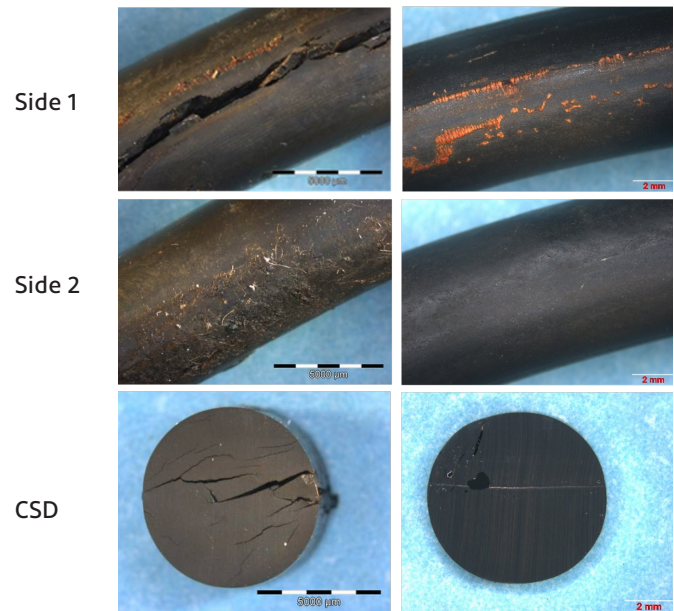
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Competitive FFKM
after 2 cleaning cycles
over ~2 years

Kalrez® Spectrum™ 7375
after 8 cleaning cycles
over ~2.5 years