

# NEWMAN

Sanitary Gasket Company

*Introducing a new standard  
of efficiency for pharmaceutical processing*  
**Kalrez® Sanitary Clamp Gaskets**  
*Stainless steel and Kalrez® perfluoroelastomer  
parts combined in a controlled compression joint  
seal that provides premium performance.*

- Perfluoroelastomer part provides the ultimate sealing performance for maximum efficiency with FDA compliance
- Extractable levels comparable to PTFE
- Resistant to high operating temperatures up to 260° C (500° F)
- Compatible with most pharmaceutical process media, including CIP and SIP
- Concave inside diameter forms flush seal when compressed; prevents intrusion into process stream



**Kalrez®**

perfluoroelastomer parts



DuPont Dow elastomers

**AUTHORIZED DISTRIBUTOR**

® Kalrez is a registered trademark of DuPont Dow Elastomer

# Kalrez®

**perfluoroelastomer parts -  
a product of DuPont Dow Elastomers**

**B**ioprocessing and pharmaceutical manufacturing processes must operate at the highest levels of cleanliness to assure product purity. Coupling points in a process line can be a particularly troublesome source of contamination from various sources if the correct sealing material is not selected, as outlined in ASME's BPEa-2000 Bioprocessing Equipment Standards. Substandard seal performance can also result in excessive process downtime and maintenance costs. Selecting the joint design and sealing material to provide the optimum balance of cleanliness and seal life is an ongoing challenge to the pharmaceutical process engineer.

DuPont Dow Elastomers is answering that challenge with the development of a new Kalrez® Sanitary Gasket design, a combination of two optimum performance engineering materials - stainless steel and Kalrez®. Developed using Finite Element Analysis to simulate the range of temperatures a seal can see, this seal is designed with a metal retainer that controls compression of the seal and minimizes its intrusion into the process stream. The result is a prefabricated seal that provides the cleanliness of PTFE and the elastic memory of an elastomer, while meeting stringent ASME requirements for joints intended for clean-in-place (CIP) and steam-in-place (SIP) applications. The Kalrez® sealing element minimizes absorption, desorption and extractables to assure minimal contamination and a long sealing life.

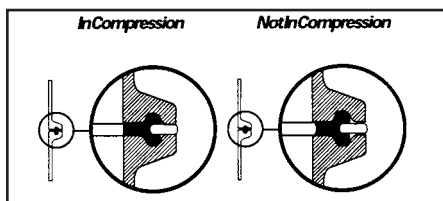
Newman Sanitary Gasket is proud to add this revolutionary product to its already superior quality line of gaskets and seals for the pharmaceutical process industries.

**NEWMAN**  
**Sanitary Gasket Company**

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## Anatomy of the Kalrez® Sanitary Clamp Gasket



### Stainless Steel Retaining Ring

- Provides for controlled compression resulting in maximum seal life and reduced maintenance (eliminates the need to re-torque)
- Rigid stainless steel ring helps maintain alignment during assembly

### Avoid these common coupling problems by specifying Kalrez® Sanitary Seals

**Intrusion from over-compression** - Too much sealing pressure can cause some elastomer seals to intrude into the process stream, resulting in product contamination. Over-compression can also result in seal splitting and loss of joint integrity.

**Joint Leakage** - Cold flow ("creep") of PTFE and some elastomers can cause loss of sealing pressure over time, requiring frequent inspections and retightening.

**Seal Degradation** - Incompatibility with fluids in the process line can cause some sealing materials to swell, crack and degrade, resulting in joint failure and process contamination. High process temperature or repeated temperature cycling can also deteriorate seals made of many materials.

### Sizes, Packaging and Availability

Kalrez® Sanitary Clamp Gaskets are available in compounds 6230 (black) and 6221 (white), supplied in individual bags and bar coded for full traceability. Kalrez® 6230 and 6221 parts comply with the requirements in U.S. FDA regulation 21 CFR 177.2600 and the extractive requirements of 21 CFR 177.2400. Sizes for 1/2", 3/4", 1", 1 1/2", 2", 2 1/2", 3" and 4" sanitary tri-clamp style fittings are available and other sizes may be available as special orders.

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**Kalrez® "O"-Rings in compounds 6230 and 6221 are available in most AS568A sizes and selected metric sizes. Call for price and delivery.**