Product Description
DuPont™ Kalrez® 8002 perfluoroelastomer parts are a clear product for ash/strip and “select” etch and deposition processes. This unfilled product offers excellent plasma-cracking resistance and ultra-low particle generation in oxygen and fluorine-based plasmas versus mineral-filled products. Kalrez® 8002 exhibits excellent resistance to dry process chemistry, has good mechanical strength and is well suited for static, low stress/low sealing force and “select” bonded door seal applications. A maximum continuous service temperature of 275 °C is suggested. Ultrapure post cleaning and packaging is standard for all Kalrez® 8002 parts.

Performance Features/Benefits
- Ultra-low particle generation in oxygen and fluorine-based plasmas
- Excellent (low) compression set properties
- Excellent plasma-cracking resistance
- Excellent resistance to dry process chemistry

Suggested Applications
- Gas inlet seals
- Gas orifice seals
- Gas feedthrough seals
- “Select” bonded door seals
- Other static and low stress/low sealing force applications

Fabs Choose DuPont™ Kalrez® 8002 for Improved Performance
Kalrez® 8002 has been reported to significantly improve wafer production in a variety of semiconductor plasma process applications where oxygen and fluorinated plasmas are used during the cleaning cycle. In a number of evaluations at fabline customers, Kalrez® 8002 exhibited improved crack resistance, lower particle generation and longer seal life compared to competitive perfluoroelastomers in both static and dynamic sealing applications.

Case Report #6548 — Kalrez® 8002 Improved Wafer Production by 100% versus Competitive Fluoroelastomer (FKM K3)
- Oxide etch VAT pendulum valve gate seal
- Process chemistry: O₂, C₄F₈
- Cleaning chemistry: N/A
- Competitive fluoroelastomer failed due to erosion, cracking and excessive leakage.
Case Report #4536 — Kalrez® 8002 Improved Wafer Production Over 50% versus Incumbent Perfluoroelastomer
- Ash top/bottom plasma tube seals
- Process chemistry: O₂, CF₄
- Cleaning chemistry: N/A
- Incumbent perfluoroelastomer failed due to erosion and excessive particle generation

Case Report #6901 — Kalrez® 8002 Improved Wafer Production Over 60% versus Competitive Perfluoroelastomer (FFKM A11)
- HDPCVD e-chuck top ring seal
- Process chemistry: SiH₄, O₂, He
- Cleaning chemistry: NF₃ plasma generated via remote plasma source
- Competitive perfluoroelastomer failed due to erosion and excessive leakage

Case Report #7252 — Kalrez® 8002 Improved Wafer Production by Over 75% versus Incumbent Perfluoroelastomer (FFKM A2)
- SACVD shower head, gas box and lid insulator seals
- Process chemistry: TEOS, O₃
- Cleaning chemistry: NF₃
- Competitive product failed due to severe erosion and melting

Case Report #6554 — Kalrez® 8002 Exhibited Improved Crack Resistance and Lower Particle Generation versus Competitive Perfluoroelastomer (FFKM A2)
- PECVD gas box, shower head and foreline seals
- Process chemistry: TEOS, TMB, O₃ at 1000 watts
- Cleaning chemistry: C₃F₈ at 2000 watts
- Competitive perfluoroelastomer failed due to cracking and excessive leakage