

DuPont Kalrez® 9500

For Semiconductor SACVD and FCVD Applications

Technical Information - March, 2017

Product Description

DuPont® Kalrez® 9500 performance-enhanced parts are a far-advanced targeted specifically for deposition processes where ozone, peroxide and water vapor are used for processing, e.g. SACVD, FCVD, PECVD curing processes, etc. It has been specifically designed for use in applications where the plasma environment is more "chemical", i.e., where oxygen and fluorine radicals are more dominant.

Kalrez® 9500 also offers outstanding thermal stability, very low outgassing and excellent mechanical strength and is well suited for both static and dynamic sealing applications. A maximum application temperature of 210°C (400°F) is suggested. Kalrez® 9500 can also withstand short-term excursions up to 300°C (572°F). Ultracure post-curing and packaging is standard for all Kalrez® 9500 parts.



Kalrez® 9500 seals are based on a proprietary technology system which is only available from DuPont.

Features/Benefits

- Excellent resistance to ozone, peroxide, water vapor, etc.
- Low erosion rate and ultra-low particle generation in radical dominated oxygen and fluorine-based plasmas
- Excellent thermal stability
- Very low outgassing and metals content
- Excellent mechanical strength

Suggested Applications

- Gas distribution/manifolds/boost seals
- Chamber lid seals
- Isolation valve seals
- Boosted gate valves/tilt valve door seals

Typical Physical Properties*

Color	Tan
Hardness, Shore A (Flex Seal)†	70
Hardness, Shore B (Living)†	60
100% Modulus, MPa (psi)	9.4 (1350)
Tensile Strength at Break†, MPa (psi)	14.4 (2075)
Elongation at Break†, %	100
Compression Set†, %	
70 kPa at 210 °C (400 °F)	30
70 kPa at 250 °C (480 °F)	30
70 kPa at 310 °C (590 °F)	30
Maximum Application Temperature†, °C (°F)	210 (400)

*Includes useful specification ranges.
†Standard values and test methods.
‡Other values are available upon request.
§Other test methods are available.
¶Other values are available upon request.
‡Other properties not listed.



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