CP75TB11 Datasheet

Translucent Brown Perfluoroelastomer 75A for Semicon

Overview

Canrez® CP75TB11 is a 75 Shore A, semi-translucent FFKM compound engineered for advanced semiconductor plasma processing applications. Designed for harsh PECVD, ALD, HDPCVD, and conductor etch environments, CP75TB11 delivers low erosion rates, ultra-low particle generation, and excellent resistance to aggressive dry process chemistries.

It provides outstanding thermal stability, minimal outgassing, strong mechanical integrity, and excellent elastic recovery for both static and select dynamic sealing applications. CP75TB11 is a cost-effective alternative to Kalrez® 9100.

Semiconductor Applications

- RPCVD, PECVD, SACVD, ALD, & HDPCVD
- CVD, LPCVD, & APCVD deposition
- Ashing
- Oxide & metal plasma etching
- Evaporation & PVD metallization
- Ion Implant & Sputtering
- Lamp Anneal, Oxidation, RTP, & Diffusion

Features & Benefits

- Excellent Plasma Resistance
- Near universal chemical resistance
- High Temperature Resistance
- Low Compression Set
- Cost Effective

Service Temperature

-10°C to 325°C (14°F to 617°F)

Test Data

Table 1. Physical Properties	
Color	Translucent Brown
Hardness, Shore A	75
Tensile Strength, psi (MPa)	2552 (17.6)
Elongation	190%

Table 2. Compression Set	
70hrs at 200°C	7
70hrs at 290°C	26

Looking for specific chemical compatibilities or desire more material information? Please Contact Us!

Rev C - Update: 05/22/2024

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Canrez® CP75TB11 vs Kalrez® 9100

Canrez® CP75TB11 delivers plasma resistance and sealing stability comparable to Kalrez® 9100 for demanding semiconductor environments, providing a more economical solution without giving up critical performance.

While both compounds are engineered for exceptional plasma durability and dependable sealing, Canrez® CP75TB11 distinguishes itself through stronger value and availability, all while maintaining the performance standards required for advanced semiconductor processing.

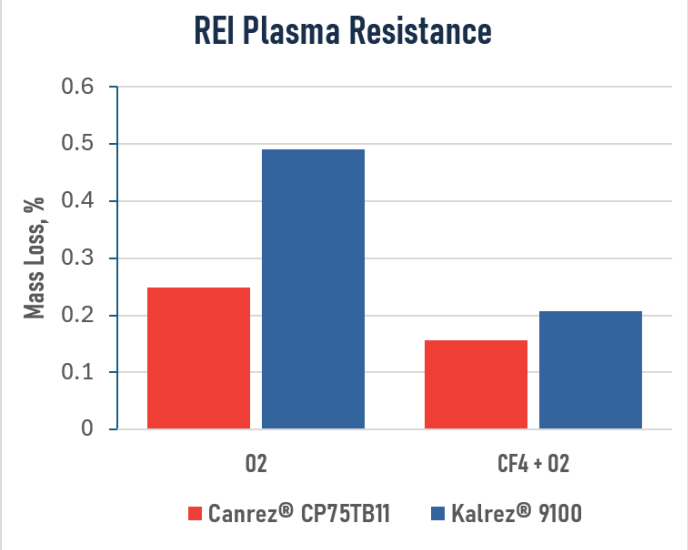

Table 3. REI Direct Plasma Exposure

Gas	CP75TB11	9100
O2, Mass Loss %	0.2486	0.4902
CF4 + O2, Mass Loss %	0.1558	0.2075

Table 4. REI Direct Plasma Exposure Test Process Conditions

Parameter	O2	CF4 + O2
Plasma Power, Watts	150	200
Pressure, mtorr	180	280
Heater Temperature, °C	RT	RT
Exposure Time, min	60	60
Gas Flow O2, SCCM	40	10
Gas Flow CF4, SCCM	N/A	100

Particle Generation

- **Optimized Formulation** Canrez® CP75TB11 is engineered with reduced inorganic filler content to enhance plasma durability while minimizing contamination risk.
- **Low Particle Generation** Many conventional FFKM materials use carbon black or mineral fillers that can contribute to particle release under plasma exposure. CP75TB11 avoids this concern.
- **Smarter Filler Approach** Inorganic fillers such as barium sulfate or titanium dioxide may resist erosion but can leave residual particles behind. CP75TB11 is designed to prevent this issue.
- **Cleaner Processing** By limiting non volatile components, CP75TB11 supports lower particle generation and cleaner semiconductor chamber environments.

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