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# Kratos O-Rings and Seals

## NuGenTec

**Struggling with Viton but no room in the budget for FFKMs like Kalrez or Chemraz? Kratos is the material designed for such applications.**

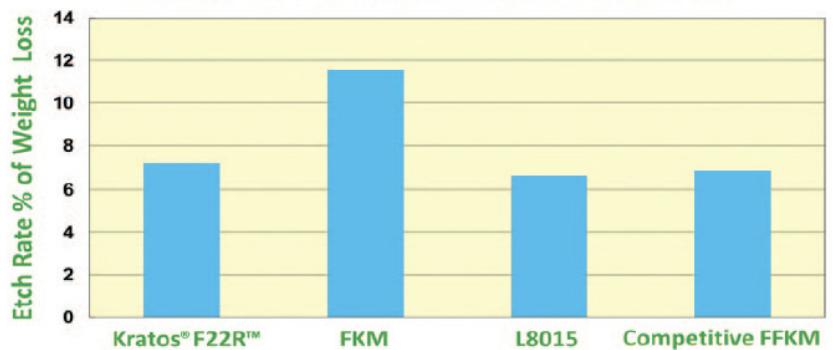
These charts show O-Ring weight loss from prolonged exposure to harsh chemistry and plasma. Notice how well Kratos holds up compared to Viton (FKM).

Kratos is far superior to Viton with regard to harsh environmental resistance.

Kratos is compatible with higher temperatures, up to 285C.

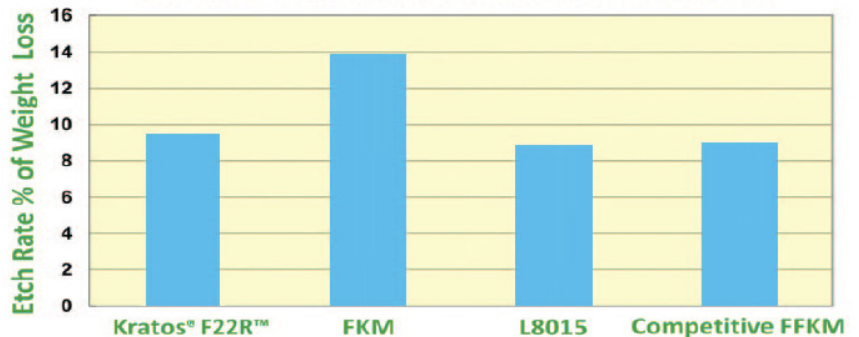
Kratos is more expensive than Viton, but nowhere near the cost of FFKM materials.

Etch Rate in C4F8 Plasma 240 W, 250 mTorr, 24 Hrs.



Source: HP Labs, Palo Alto, CA Technics Plasma Etcher

Etch Rate in O2 Plasma 470 W, 260 mTorr, 24 Hrs.



Source: HP Labs, Palo Alto, CA Technics Plasma Etcher

### Why Kratos over Viton?

- Ideal for applications where Viton does not hold up well, but FFKMs are overkill.
- Contains no metals, refractory metals, or metal oxides
- Uses an Interstitial Reinforcement System (IRS)
- Incorporates fluorinated backbone and nano-fill architecture
- Extends PM Intervals for lower CoO
- Bridges the application gap between Viton and FFKMs



**Kratos is a much lower cost material than FFKM. Kratos is designed for harsh environments and temperatures up to 285C.**