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# Encapsulated Rings (FEP)

FEP encapsulated O-rings are recommended when a standard O-ring has inadequate chemical resistance for an application.

FEP encapsulated O-rings comprise of an elastomer core which has been seamlessly encapsulated in a jacket of Teflon® fluoropolymer. The core is either Viton®, Silicone or EPDM. The jacket is FEP or PFA.

FEP encapsulated O-rings are recommended when a standard O-ring has inadequate chemical resistance for an application. They are also recommended when a solid PTFE O-ring does not have the elasticity for reliable, long term fluid sealing. They are often used where chemical resistance and or hygiene is required.

Typical industries include:

- Chemical.
- Food.
- Petrochemical.
- Pharmaceutical.

Eastern Seals (UK) Ltd can provide practically any size of encapsulated rings. We hold many sizes in stock. We offer solid and hollow core styles as well as cam and groove gaskets.

Hollow core silicone Encapsulated O-Rings have greater compressibility compared to solid core O-Rings. The hollow core flexibility means less clamping force is required to enable its sealing abilities. These O-rings are ideal for fragile applications using sensitive

materials, such as glass or light plastics. They are particularly useful for where the sealing area may require room for movement during operation.

Encapsulated O-rings are available in cross sections from 1.78mm to 25.4mm. The only size limits are with the smaller ID's, as the diameter of the cord dictates the smallest possible ID.

FEP encapsulated O-rings offer excellent resistance to a wide range of chemicals. They offer typical temperature ranges of:

- -60°C to +200°C with Silicone core.
- -20°C to +200°C with Viton® core.

They offer low friction and a low 'stick-slip' effect.

PFA encapsulated O-rings offer extra abrasion resistance. When combined with a Silicone core, they offer a temperature range of -60°C to +260°C.

We also supply PFA encapsulated O-rings with a Viton® core. These seals offer a temperature range of -20°C to +200°C. Viton® core PFA encapsulated O-rings also provide extra abrasion resistance.

“ We supply a wide range of custom encapsulated O-rings available on short lead times, and can provide bespoke CSD profiles / shapes for our encapsulated seals. ”

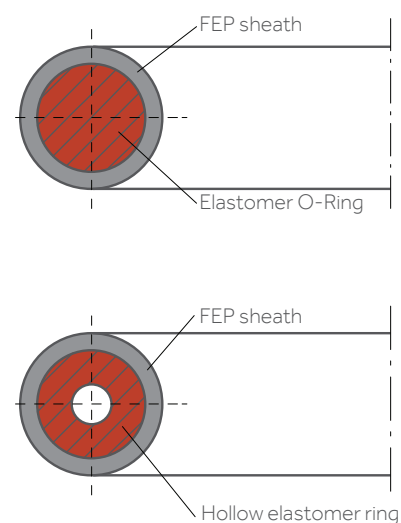


Fig 1.1 Different versions of FEP O-Ring