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# **FEP/PFA Encapsulated Seals**



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COR Manufacturing has the capacity to supply virtually any cross-section and diameter size or shape of seals, backed by a Stock Guarantee on the most common items and a short lead time on the rest. Our factory has a carefully monitored in-house production and multiple levels of electronic inspection ensure high product quality and reliability.



An Encapsulated 'O'-Ring is an 'O'-Ring bound by a seamless and uniform FEP/PFA encapsulation, which encloses an elastomeric core, completely protecting it from the media. They combine the energising properties of an elastomeric 'O'-Ring with the resilience to extreme temperatures and hostile chemicals of FEP/PFA.

# **Benefits of Encapsulated Seals**

- Exceptional resistance to aggressive chemicals and gas permeability
- Cost efficient alternative to Kalrez® and similar perfluoroelastomer 'O'-Rings
- Low coefficient of friction allowing reduced wear of equipment
- Adaptive sealing force of an elastomeric 'O'-Ring
- Resistant to compression set/cold flow issues of solid 'O'-Rings

### **Benefits of Encapsulated Seals**

**FEP Encapsulation:** Standard material for all applications up to 205°C, resistant to virtually all chemicals and joined by an advanced heat moulding process to give a seamless encapsulation.

**PFA Encapsulation:** Same properties as FEP encapsulation but with greater heat resistance for applications above 205°C. Also resistant to virtually all chemicals and joined seamlessly via advanced heat moulding process.

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## **Inner Core / Profile Options**



#### **Silicone Inner Core**

Commercially best material option combined with lower Shore Hardness and greater elasticity than Viton™ rubber, providing an excellent material choice for the majority of applications.

#### Viton™ Inner Core

Greater chemical resistance than Silicone. If encapsulation is damaged, Viton™ rubber provides greater resilience to chemical attack.

#### **Silicone Hollow Inner Core**

Greater compressibility than solid Silicone core, with a hardness similar to a standard elastomeric 'O'-Ring. The hollow core flexibility means less clamping force is required to enable its sealing abilities. Ideal for fragile applications using sensitive materials, such as glass or light plastics. Useful for where the sealing area may require room for movement during operation.

#### Silicone/Viton™ Square/Rectangular Core

Designed to be a gasket seal, as opposed to an 'O'-Ring. In particular, the rectangular cross-section is designed to be a universal fit, non-contaminating. It eliminates the need to specify different elastomers for different applications and stops coupling leakage due to chemical attack or creep of a solid PTFE gasket seal.

#### **Custom Core Profile**

We also manufacture special custom profile and ring shapes to your application needs.

# **Ring Shape Options**

#### Non-standard ring shapes

Non-standard ring shapes (e.g. square, rectangular, oval) are possible on request to suit specific application requirements.

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