

O-Rings



O-rings are the most commonly used sealing products. They are very effective as well as being relatively inexpensive and reliable.

O-rings are designed to offer sealing in both static and dynamic applications.

A wide range of elastomers are available including Nitrile (NBR), Hydrogenated Nitrile (HNBR), Silicone (VMQ), Polyurethane (PU), Perfluoroelastomer (FFKM), Viton®/FKM and PTFE. As well as standard grades many derivatives are also available.

Our current stock of over 80 million rings across 10,000 individual sizes ensures that we can remain competitive for both the largest and smallest enquiries.

We can provide same day despatch for stock items and offer relatively short lead times on non-stock items.

We can pack to individual specifications / requirements, providing all certification upon request.

All our products are clearly marked with part numbers, batch numbers and cure dates both in text and, if required, barcode formats. All products are fully traceable.

PERFLUOROELASTOMER/ FFKM

As standard, FFKM has excellent resistance to extreme temperatures -10°C to +260°C and some special compounds can operate beyond 330°C.

It offers resistance to almost all chemicals, including inorganic acids, alkalines, ketones, esters, alcohols, fuels, and hot water and is used for applications in aggressive chemical environments.

Our standard FFKM compound (FFKM75B) has outstanding heat resistance with a service temperature of -10°C to +310°C, and offers very good chemical resistance.

In addition, we have many other FFKM materials to suit a range of applications.

AED / EDR / RGD

Explosive decomposition (ED), also known as rapid gas decomposition (RGD), is a failure of elastomeric O-Rings, where Gas can be absorbed into the material under high-pressures at elevated temperatures. If the rate of decomposition occurs quickly the gas expands beyond the materials ability to contain the gas bubbles, causing fissuring and resulting in seal failure.

We supply Norsok M-710 Certified Anti-Explosive Decompression (AED), Explosive Decompression Resistant (EDR) O-Rings at very competitive pricing.

AEROSPACE / MILITARY SPEC

We can supply from Precix Inc, a major provider of high-specification O-rings for the demanding environments of Aerospace and Defence applications.

We supply O-rings approved to the latest Aerospace / Military specifications. All parts are manufactured in the USA within Quality Management System to ISO/TS 16949:2009 & AS9100.

“ We supply **NORSOK M-710 RGD resistant** seals to many major companies across the globe, operating in high pressure gas environments. ”

O-Rings

Material	Shore Hardness	Standard Compound Working Temperature	FDA	WRAS	Peroxide Cured	USP	AED / NORSOK	Metal Detectable
Nitrile (NBR)	40-90	-40°C to +110°C	•	•	•			•
Silicone (SIL)	30-90	-50°C to +204°C	•	•	•	•		•
Fluorocarbon (Viton® / FKM)	60-90	-20°C to +204°C	•		•	•	•	•
Ethylene-Propylene (EPDM)	40-90	-55°C to +135°C	•	•	•	•		
Neoprene (CR)	40-90	-32°C to +149°C	•					
Hydrogenated Nitrile (HNBR)	70-90	-30°C to +150°C					•	
Fluorosilicone (F-SIL)	50-80	-55°C to +177°C						
Perfluoroelastomer (FFKM)	75-90	-10°C to +260°C	•		•	•	•	
Polyacrylate (ACM)	60-80	-10°C to +149°C						
Ethylene Acrylate / Vamac® (AEM)	60-70	-40°C to +149°C						
Aflas® (TFE / P)	70-80	-9°C to +204°C						
Epichlorohydrin (ECO)	50-90	-40°C to +121°C						
Butyl (IIR)	60-70	-50°C to +121°C						
Natural Rubber (NR)	50-80	-50°C to +70°C						
Polyurethane (PU)	70-90	-40°C to +80°C						
Styrene Butadiene (SBR)	50-80	-45°C to +100°C						
Carboxylated Nitrile (XNBR)	70-80	-30°C to +150°C						

Within the Materials section on our website, you will find further information on the many types of compounds we supply.

Downloadable datasheets are also available for these materials. There are so many possible variations that we have listed only the most popular materials. If you require further details regarding any of our compounds, please contact us.

The following is a summary of compounds we supply:

FDA

Compliant for use with Food stuffs.

WRAS

Approved for the use of Potable water.

USP Class VI

Often requested by end users such as medical or pharmaceutical processing companies as it provides added assurance for the quality and performance of utilised materials.

PEROXIDE CURE

Most compounds are usually sulphur cured. Some materials (as detailed in the above list), are available as peroxide cured on request.

COLOURS AVAILABLE

Generally: Black is the standard colour for most compounds, red for Silicone. Other colours can be supplied on request.

METAL DETECTABLE

Metal detectable compounds are also available - contact us for more information.

WORKING TEMPERATURES

For guidance purposes we have shown the working temperatures of our standard compounds. Where a lower or higher temperature is required, specially formulated compounds are available on request. For example FFKM is available for a high temperature of -330°C.

“ You tell us the **ID, Cross Section and material**, and **we will do the rest.** ”