

High Performance Elastomer Seals

- Any size seal, any profile, any material
- Order quantities from 1 to 2000+ pieces
- Short manufacturing lead-times
- Rapid delivery service
- Design service & technical support
- NORSOK & NACE tested materials



- O-rings
- Back-up rings
- Metal bonded components & composite seals
- Piston, rod & rotary seals
- Wipers
- Lip seals
- Bearings (guide rings)
- Custom designed seals

PERLAST®

Perfluoroelastomers (FFKM) exhibit the ultimate in high temperature capability (up to 617°F) and are the most chemically resistance elastomer available. Tested to NACE E.D. requirements, **Perlast® G92E** offers excellent resistance to oil-well sour gases, high temperature steam, low out-gassing and provides good long-term HTHP performance.



Aflas® fluoroelastomers (FEPM) provide excellent thermal stability and have a unique chemical resistance profile with the ability to withstand sour gas and oil, acids, strong alkalis, steam, amine corrosion inhibitors, water-based drilling and completion fluids and high pH completion fluids.

Reg trademark: Asahi Glass

ENDURA®

The EnDura® range of elite materials has been specifically developed for use in downhole, surface and subsea oilfield equipment. Tested to various E.D. standards, the range includes unique material grades that provide outstanding chemical resistance, mechanical properties and low temperature performance.

CASE STUDY

Superior sealing solutions for borehole seismic equipment

A leading international seismic equipment manufacturer carried out comparative tests on **EnDura® V91J, V91A** and various competitor O-rings. The O-rings were subjected to typical operating conditions of temperatures between -40°F and +446°F and pressures up to 30,000 psi. The EnDura® V91J and V91A O-rings outperformed all other materials tested with a significant increase in service life achieved. The manufacturer commented that superior materials, excellent quality and short manufacturing lead-times made PPE their seal manufacturer of choice.

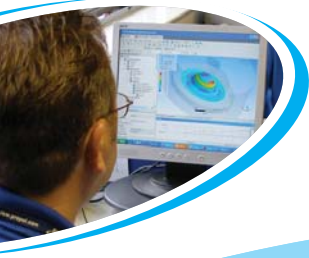
Rapid manufacturing lead-times

PPE understands that the oilfield industry demands the highest level of service and responsiveness. Our in-house tool-making department and production facilities contain the latest and most efficient equipment in the world which results in rapid manufacturing capabilities. If the required component is not available from stock, it can be manufactured within the shortest lead-times in the industry. For time critical and emergency breakdown situations, PPE offers a 48hr rapid manufacturing service. Contact us for more details.



Technical support

Support and expert technical advice are always available from PPE. Our engineers can design custom shapes and profiles to meet any sealing requirements. CAD drawings can be combined with 3D modelling and behavioural-predictive tools such as FEA (finite element analysis), to ensure the seal functionality is right first time, every time. PPE material technologists provide support on material selection and compatibility, testing and analysis. Our consultancy service and field support includes on-site assistance with problem solving and troubleshooting.



CASE STUDY

Rapid redesign of compressor seals for North Sea platform

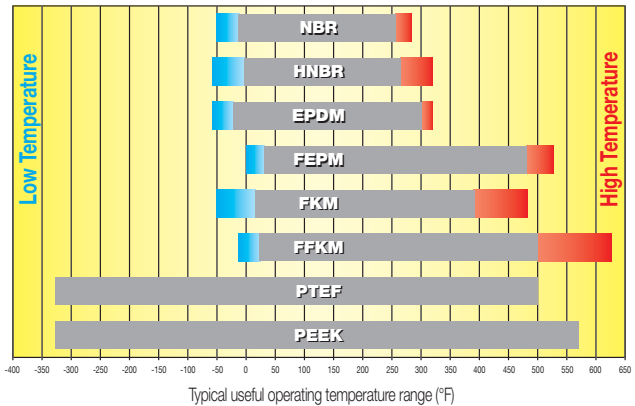
When a compressor used in transporting gas from a North Sea gas platform to onshore storage facilities failed unexpectedly, PPE were tasked with replacing the failed scarf-jointed, cord seal with a more reliable seal. Within 48 hours PPE's rapid response service designed and manufactured a 4ft diameter O-ring made from explosive decompression resistant FKM elastomer. As a result, the new higher quality seal has provided longer production up-times and eliminated the unpredictability of using the previous jointed cord seals.

Materials

EPDM Ethylene-Propylene
 FEPM Tetrafluoroethylene/Propylene
 FKM Fluorocarbon
 FFKM Perfluoroelastomer
 HNBR Hydrogenated Nitrile
 NBR Nitrile
 PEEK Polyaryletheretherkeytone
 PTFE Polytetrafluoroethylene

- Normal operating temperature
- Short-term operation or special high temperature grade required
- Short-term operation or special low temperature grade required

Typical temperature capability of high performance sealing materials



Seal Manufacturer:



Precision Polymer Engineering

A Unit of



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