



EnDura® from PPE

- the ultimate range of elastomers for sealing applications in the world's most aggressive high pressure environments.

Precision Polymer Engineering (PPE) consulted many leading operators and service companies to understand the sealing needs of the oil and gas industry. The outcome of this research was the EnDura® range of elastomers that are able to withstand Explosive Decompression (ED), resist extrusion and provide sealing reliability in a broad range of chemical media and temperatures.





What is EnDura®?

The EnDura® range of materials comprises of specially formulated elastomer compounds designed for high pressure environments.

EnDura® materials have been developed to overcome the problems associated with ED. Each material grade has undergone rigorous in-house testing utilizing PPE's specialized ED test rigs, along with external third party testing and industry specific certification.

The EnDura® range includes the most durable polymer types such as EPDM, HNBR, FKM and FEPM to provide the ultimate in sealing performance across a broad range of applications. Within the range are specialized materials for low temperature performance, sour gas resistance, oil resistance and high temperature steam.

Why EnDura® from PPE?

EnDura® materials push the boundaries of both temperature and pressure capability for critical applications that require resistance to explosive decompression.

PPE's design capability, coupled with industry leading materials ensures the optimum sealing solution, reinforced by various industry qualifications.

- Expert technical support both before and after the sale
- Design advice to optimize the seal for the intended operating conditions
- Shortest manufacturing lead-times for time critical requirements
- · Global sales, manufacturing, and support coverage

Why use EnDura®?

ED resistance

- Materials qualified to:
 - o NORSOK M-710
 - o Total GS PVV 142
 - o ISO 23936-2
 - o NACE TM0297
- A complete design and test capability to prove material selection and design parameters for specific applications.

H₂S resistance

- Broad range of test data available on extreme temperatures and sour gas concentrations.
- · Third party test certifications.

Low temperature capability

- Wide range of materials for high pressure applications with low temperature performance such as API 6A PR2 cycle testing.
- Low temperature performance without sacrificing fluid resistance.



EnDura® Products

EnDura® materials can be molded into a wide range of shapes, profiles and sizes to suit any sealing application.

Typically EnDura® elastomers are available as O-rings, X-rings, T-seals, L-seals, lips seals, wiper seals, spring seals and many more profiles, including custom designed components and metal bonded parts.

Typical Applications

EnDura® materials are typically used in a wide range of critical sealing applications within the oil and gas industry, including:

- · Subsea and surface equipment
- Completion tools
- Production tools
- Compressors
- Pumps
- Valves

Design Service and Material Testing

With over 30 years of experience in the oil and gas industry, PPE has the technical knowledge and expertise to provide sealing solutions for the most critical and challenging applications. PPE's team of Application Engineers and Materials Scientists work closely with customers, from initial concept through design, testing, commissioning and operation.

PPE maintains laboratories in the UK and Houston, Texas for polymer testing, including ED resistance, fluid compatibility, material and seal failure analysis.













For More Information

For further information on ED and sour gas resistance refer to PPE brochures "Explosive Decompression Resistant Elastomers" and "Sour Gas Resistant Elastomers." Brochures, test reports, certificates and material datasheets are available to download from the PPE website: www.prepol.com/endura





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Exceptional perfluoroelastomers for extreme low temperature sealing applications.

PERLAST®

The ultimate perfluoroelastomers for sealing applications where chemical resistance and high temperature performance are critical

Local PPE sales agent:

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