

Plastics for Oil and Gas Applications



Benefits of Plastic:

- Ease of fabrication
- Impact and abrasion resistance
- High-temperature and low-temperature capabilities
- Resistance to chemicals, moisture, and corrosion
- Reduced fuel costs
- Excellent bearing and wear characteristics

Engineering materials to fulfill your needs

Few industries are as demanding on their equipment as oil and gas exploration and production. Extreme temperatures, harsh environmental conditions, corrosive seawater, chemical exposure, and extraordinary friction and wear demands all add up to make uninterrupted operation one of engineering's greatest challenges.

High-performance polymers offer many advantages over metal when used appropriately for machined components in oil and gas applications. With their light weight, cost-efficiency, durability, and resistance to heat, steam, chemicals, and corrosion, they improve performance and add exceptional value wherever they are applied: underground or in subsea systems, downhole or in rigging operations, and in exploration, oil refining, or hydraulic fracturing (fracking) operations.

Material selection, expert advice

Our plastic material and part design experts work daily with equipment manufacturers, design and cost engineers, maintenance and repair professionals, and procurement and supply chain managers. We assist with application and component design challenges; material selection, supply, and inventory management; stock shapes cut-to-size; prototype development; and part fabrication.

TYPICAL APPLICATIONS:

- Backup rings
- Ball valves
- Bearing and wear components
- Compressor valve plates
- Downhole insulators
- Labyrinth seals
- Lantern rings
- O-rings
- Piston rings and seals
- Poppets
- Seal and packing components
- Sealing liquid natural gas or other cold media
- Sheaves
- Slipper seals
- Spring-energized seals
- Subsea connectors
- Valve seats
- Wear pads

COMMON MATERIALS:

- PEEK
- PTFE
- DuPont™ Vespel® Polyimide
- PPS
- Nylon



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www.curbellplastics.com
1.888.CURBELL (287-2355)

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