



OIL & GAS

Performance plastics are playing a key role in the energy boom, making it easier to reach previously untapped sources of oil and gas to fuel the economy.

APPLICATIONS

- Piston, chevron and gland seals
- Anti-extrusion rings and back-up rings
- Valve seats
- Packings
- Bushings, bearings
- Lantern rings
- Frac balls
- Labyrinth seals
- Down-hole electrical insulators
- Gaskets
- Lifting systems components (sheaves, rollers, guides)
- Shrouds
- Sight glasses
- Pipe and pipe support systems (saddles, carrier rings) grating/stairs

ADVANTAGES MAY INCLUDE

- Reduced weight and lower cost than traditional materials (specialty metals)
- Better sealing performance
- Greater design flexibility (most engineering plastics are readily modified for specific applications)
- Handles harsh environments (from downhole heat to Arctic conditions to subsea systems)
- Corrosion resistant
- Improved efficiencies (better sealing properties, lower coefficient of friction)
- Easier to machine, ship and install
- Reduce/eliminate lubrication dependency
- Excellent electrical insulation properties
- Static dissipative and conductive grades available
- Less wear on mating parts

MATERIALS

- Acrylonitrile Butadiene Styrene (ABS)
- Chlorinated Polyvinyl Chloride (CPVC)
- Nylon (PA)
- Other Fluoropolymer Compounds
- Polyetheretherketone (PEEK)
- Polyethylene (PE)
- Polytetrafluoroethylene (PTFE)
- Polyphenylene Sulfide (PPS)
- PolyAmide-Imide (PAI)
- Polyimide (PI)
- Thermoset Composites (Phenolics)



DID YOU KNOW?

Even small percentage efficiencies gained by replacing metallic labyrinth turbocompressor seals with abrasion or wear resistant polymeric seals can result in hundreds of thousands of dollars in increased production.