

Premium Sucker Rod Guide Materials

Premium Thermoplastics with Reinforced Glass or Aramid Fibers

Applications

- Reciprocating rod lift and PCP systems
- Highly deviated well conditions

Materials Description

Weatherford sucker rod guide materials use a wide range of premium thermoplastics to match a variety of production applications, Weatherford offers rod guide solutions for the most demanding wells, including those with high water cuts, high temperatures, corrosives, and abrasives.



Cobra
Sucker-Rod Guides

King Cobra
Sucker-Rod Guides

Materials Specifications

Material	Base Polymer	Continuous Use Temp Limit	Sour Crude	Water/ Brine	Tubing Wear	Application
AF	PPA Polyphthalamide	400°F (204°C)	Reliable	Reliable	Reliable	Excellent chemical resistance, dependable wear properties
PPS	PPS Polyphenylene	400°F (204°C)	Superior	Enhanced	Reliable	Excellent wear properties, excellent chemical resistance (40% glass)
PPS-LG	PPS Low-Glass	400°F (204°C)	Superior	Superior	Superior	Low-glass material, excellent chemical resistance
PK-X	Polyketone	280°F (138°C)	Superior	Superior	Superior	CSG and CBM, polylined or coated tubing, plus oil and gas applications

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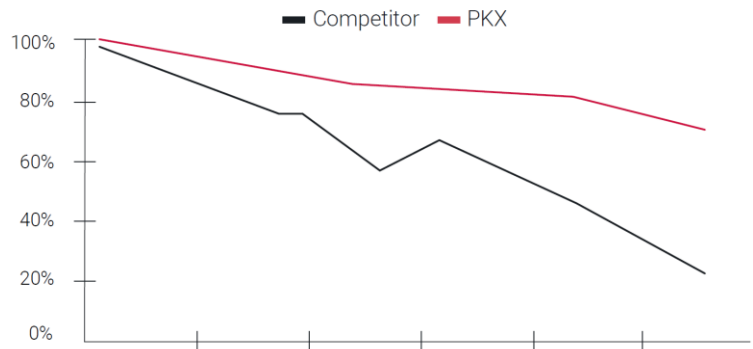
Material Specifications (continued)

Weatherford PK-X Material

Comprised of an elastomer blend formulated from unfilled-glass material for enhanced performance.

- Zero abrasive fillers such as glass fibers
- Optimized tubing protection minimizing tubing wear
- Proprietary blend enhances high-abrasion resistance, enabling durability in low lubricity
- Enhanced resistance to corrosion inhibitors

Wear Test: % Life Left



Weatherford PPSF Rod Guide Material

Blended with low-glass-filled material for enhanced performance and durability.

- PPSF20 material uses a less-abrasive compound compared to most rod guide materials
- Contains ~15-20% glass for extended runtime when paired with PPSF20 material
- Improves tubing protection and reduces tubing wear
- Excellent resistance to aromatics, corrosion inhibitors, acids, CO₂ and H₂S, and other chemicals

Item	Weatherford Specifications
Based Polymer	PPS
Glass Fiber Content	15-20%
Max Temperature	400°F (204°C)
Hardness (R scale)	110
Tensile Strength	15.9 ksi (110 MPa)

