WR® 300

Standard Wear Material

Thermoplastic Composite

WR® 300 is a carbon-fiber reinforced compression molded PEEK frequently selected by pump manufacturers and users for pump bushings and case or impeller wear rings. Maximum service life is achieved in clean, lubricated, and/or moist environments.

WR® 300 allows the pump user to increase pump efficiency by running tighter wear ring clearances while decreasing potential pump damage when pumps are cavitated or experience radial bearing failures. WR® 300 is API 610 approved for (stationary/stationary and rotating) wear applications.

Features and Benefits

- Excellent chemical resistance
- Nongalling/nonseizing properties
- Low coefficient of friction
- Impact resistance
- Thermal shock resistance

Availability

Greene Tweed's CPI/MRO group maintains common wear ring and bushing billet sizes in inventory. Outer billet diameters range from 1 in. to 33 in. (2.54 cm. to 83.82 cm.), and lengths of up to 8 in. (20.32 cm.) are possible.

Limitations

WR® 300 should not be used in abrasive medias or in press-in applications above 275°F (135°C)

Typical Properties	
Physical Properties (ASTM Standard)	**Typical**
Color	Black
Specific Gravity (D792)	1.43
Hardness, Shore D, Points (D2240)	93
Hardness, Rockwell M, Points (D785)	106
Mechanical (ASTM Standard)	
Compressive Strength, psi (MPa) (D695)	29,300 (202)
Elongation @ Break, % (D638)	1.8
Flexural Modulus, psi (MPa) (D790)	1,580,000 (10,894)
Flexural Strength, psi (MPa) (D790)	30,700 (212)
Heat Distortion Temperature @ 264 psi (D648)	600°F (315°C)
Tensile Modulus, psi (MPa) (D638)	1,570,000 (10,825)
Tensile Strength @ Break, psi (MPa) (D638)	19,400 (134)
Thermal (ASTM Standard)	
Coefficient of Thermal Expansion, 15.3 x 10^{-6} in./in./°F, (73°F to 290°F (23°C to 143°C)	15.3 x 10^{-6}
Heat Distortion Temperature @ 264 psi (D648)	600°F (315°C)
Maximum Service Temperature, °F (°C)	275°F (135°C)