

Differences Between GFP and GFP-55 (Graphite Fiber Reinforced PTFE)

Bal Seal has created a replacement product known as GFP-55.

RECIPROCATING TEST CONDITIONS	GFP	GFP-55
Pressure	6000 psi (422 kg/cm ²)	6000 psi (422 kg/cm ²)
Piston Material	Sapphire	Sapphire
Speed	6 feet/min	6 feet/min
Media	Water	Water
Seal Life before Failure	840 hours	1250 hours

Bal Seal Tests using Gilson 321 HPLC Reciprocating Pumps, (Ref QRDP 1001).

MECHANICAL PROPERTIES	GFP	GFP-55
Tensile strength per ASTM D 638	2,530 psi average (178 kg/cm ²)	2,750 psi average (193 kg/cm ²)
Elongation Per ASTM D 638	225% average	210% average

Results represent minimum of 20 data points.

K Wear Factor in Air	GFP	GFP-55
Bal Seal MT-56 (Modified Thrust Washer)	$66 \times 10^{-10} \frac{\text{in}^3 - \text{min}}{\text{ft} - \text{lbs} - \text{hr}}$	$74 \times 10^{-10} \frac{\text{in}^3 - \text{min}}{\text{ft} - \text{lbs} - \text{hr}}$

Test Conditions: Speed = 75 fpm (0.38 m/s), Pressure = 667 psi (47 kg/cm²)

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