Graphite-Filled Polytetrafluoroethylene (G)

G is a general-purpose material limited to light-duty service where more extrusion and creep resistance and less wear than virgin PTFE are required. **G** has a lower coefficient of friction than PTFE in water and other aqueous media; however, it is not recommended for general use in vacuum or dry gas applications.

G is recommended for use in applications that require good wear in liquids and humid conditions at temperatures from –450 °F to +450 °F (-268 °C to +232 °C). It can also be used in laboratory equipment and in general-purpose applications.

Chemical Compatibility

G has good chemical compatibility. This material is compatible with most fluids and gases, except strong oxidizers and certain concentrated acids. For more information, reference Technical Report TR-60A in our online technical library at www.balseal.com.

FDA Compliance

G is not FDA compliant.

Mechanical Properties

The mechanical properties of **G** at ambient temperatures are:

Tensile strength	ASTM D638	3200 psi (225 kg/cm²)
Elongation	ASTM D638	250%

The following chart shows the wear rate of **G** when it comes in contact with different media at various speeds and pressures.

"K" Wear Factor In³-min./ft-lb-hr x 10^{-10} *("K" Cm³-min./Kg-m-hr x 10^{-7})*				
AIR	**WATER**		**OIL**	
Wear Rate at 50,000 P.V.	Wear Rate at 100,000 P.V.		Wear Rate at 100,000 P.V.	
Speed (75 FPM) – pressure (667 PSI)	Speed (100 FPM) – pressure (1000 PSI)	Speed (1000 FPM) – pressure (100 PSI)	Speed (100 FPM) – pressure (1000 PSI)	Speed (1000 FPM) – pressure (100 PSI)
550 x 10^{-10} *(65 x 10^{-7})*	10 x 10^{-10} *(1.2 x 10^{-7})*	150 x 10^{-10} *(17.8 x 10^{-7})*	2.0 x 10^{-10} *(0.2 x 10^{-7})*	15 x 10^{-10} *(1.8 x 10^{-7})*

Color

Black

Advantages

- Suitable for use in aqueous media
- Higher resistance to extrusion, creep and wear than virgin PTFE in air and aqueous media
- Lower friction than PTFE in aqueous media

Other Information

For additional information, please contact a Technical Sales Representative at (949) 460-2100.
We maintain a vast library of material references and testing information.

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