

## Glass-Filled Polytetrafluoroethylene (GL-20)

**GL-20** is recommended for extreme service conditions and for dry, vacuum services. **GL-20** has excellent wear and extrusion resistance with low outgassing.

Because this material is highly abrasive, metal surfaces in contact with a seal made from **GL-20** should have a hardness of Rc 50 or higher.

**GL-20** is recommended for applications that require good wear resistance in liquids and humid conditions at temperatures from -320 °F to +475 °F (-196 °C to +246 °C).

### Chemical Compatibility

GL-20 has excellent chemical compatibility. This material is compatible with most fluids and gases, but it is not recommended for use with alkali metals, hydrogen fluoride, lithium, potassium, sodium and fluorine at elevated temperatures. (For more compatibility information, request report TR-60A, or go to [www.balseal.com/techlib](http://www.balseal.com/techlib). Select **Technical Reports**, then select **TR-60A Chemical Compatibility Guide**)

### FDA Compliance

**GL-20** is not FDA compliant. (Request Research Report 50-640 for Bal Seal's definition of FDA compliant).

### Mechanical Properties

The mechanical properties of **GL-20** at ambient temperatures are:

Tensile strength	ASTM D638	3000 psi (211 kg/cm 2)
Elongation	ASTM D638	160%

The following chart shows the wear rate of **GL-20** when it comes in contact with different media at various speeds and pressures.

"K" Wear Factor In <sup>3</sup> -min./ft-lb-hr x 10 <sup>-10</sup> ("K" Cm <sup>3</sup> -min./Kg-m-hr x 10 <sup>-7</sup> )				
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)
Testing in Process	Testing in Process	Testing in Process	Testing in Process	Testing in Process

### Color

White

### Cost

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### Advantages of GL-20

- Excellent extrusion resistance
- Excellent wear resistance
- Improved creep resistance
- Improved stability at high temperatures and high pressure

### Other Information

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

It is essential that the customer run evaluation testing under actual service conditions with a sufficient safety factor to determine if the proposed, supplied, or purchased, Bal Seal Engineering products are suitable for the intended purpose and to confirm expected results. Bal Seal Engineering makes no warranty, express or implied, regarding Bal Seal Engineering products or of the information contained herein, including but not limited to, warranties of merchantability, performance, and fitness for a particular use or purpose. Bal Seal Engineering shall not be liable for any loss or damage of any kind or nature that may result from the use of, reference to, or reliance on, the information contained herein, including, but not limited to, consequential, special (including loss of profits) direct, indirect, incidental, or similar damages, even if Bal Seal Engineering has been advised of the possibility of such damages. © 2010 R-34 (50-87); M13 Rev. C (623-12 and 623-64) 04-13-10