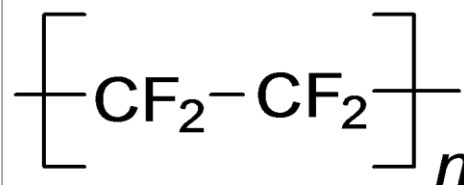


## Glass/Molybdenum Disulfide Filled Polytetrafluoroethylene (PTFE, Glass, MoS<sub>2</sub>)

### SPECIFICATIONS

Property	Spec	Value
Hardness	ASTM D-2240	58 D
Specific Gravity	ASTM D-792-66	2.27
Tensile Strength	ASTM D-1708-79	2,375 psi
Elongation	ASTM D-1708-79	240%
Flexural Modulus	ASTM D-790-80	2.41 x 10 <sup>3</sup> psi
Flexural Strength	ASTM D-790-80	
a) 1% Strain		1,350 psi
b) 3% Strain		2,250 psi
Deformation		
a) 78° F, 2000psi, 24hrs	ASTM D-621-64	
Total Deformation		7.1%
Permanent Deformation		3.9%
b) 500° F, 600psi, 24hrs	ASTM D-621-64	
Total Deformation		10.9%
Permanent Deformation		6.8%
Limiting PV		
a) 10 fpm		12,500 psi x fpm
b) 100 fpm		12,500 psi x fpm
c) 1000 fpm		15,500 psi x fpm
Wear Factor	K x 10 <sup>-10</sup>	6.0
Coefficient of Friction		
a) Static @ 33.33 psi	ASTM D-3702	0.06
b) Dynamic @ 33.33 psi, 150 fpm	ASTM D-3702	0.09
Color		Gray



### DESCRIPTION

MT08 is a PTFE material with hardness 58 Shore D, specially compounded with glass-moly fillers. Polytetrafluoroethylene (PTFE) has exceedingly strong carbon-fluoride bonds (C-F). PTFE has a simple, linear, flexible and regular molecular structure, which makes it highly crystalline. Commercial PTFE is a high molecular weight polymer. Fluorine atoms form a tight sheath of protection providing PTFE with extreme molecular and physical properties. The sheath prevents PTFE from external influences upon the carbon-carbon backbone. It also results in weak interactions/bindings between polymer chains. These molecular structure properties make PTFE extremely resistant to chemicals or solvents even at very high temperatures and high pressures. PTFE also has very low friction and good anti-stick characteristics. PTFE is tough and flexible even at very low temperatures. However the same molecular structure properties result in mediocre mechanical properties with low stiffness and strength among thermoplastics. PTFE articles cannot be formed with conventional processes for thermoplastics because it does not flow above its crystalline melting point. Parts can be formed by a sintering process under high temperatures.