

SEAT SELECTIONS



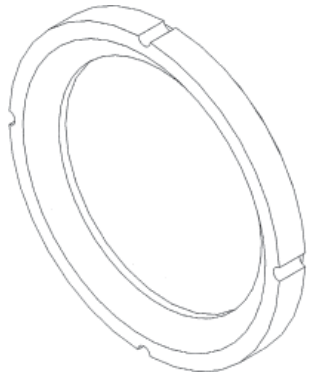
Material	Technical Description	Color	Approx. Torque Adders to the standard seats indicated in catalog page
Super-Tek (TFM)	Super-Tek, most popular seat material. Super-Tek (TFM) offers most all of the properties of PTFE with improved thermo-mechanical properties offering lower coefficient of friction for lower torques and less permeability, reduced cold flow deformation, and enhanced deformation recovery. Temperature Range -50°F to 500°F.	Off- White	Standard seats in most valves Torques indicated in catalog pages.
Kel F (PCTFE)	This material is a fluorocarbon rubber. Kel F is a registered trademark of 3M Corp. It can be used for cryogenic service at tempartures of -400°F up to 500°F at pressures up to 1500 psi.	Translucent White	+50%
Metal	Recommended for service with severe flashing or hydraulic shock, abrasive media or where possible trapped metal may exist. metal seats are hand lapped to the ball as individually matched sets, assuring line contact between valve ball and seats, resulting in smooth operation and tight shut off class. Flo-Tite offers metal seats in different classes of Shut Off including Class IV, V and VI. Extreme series can reach temperature up to 1200°F.	Metallic	ANSI Class 150 +60% ANSI Class 300 +70% ANSI Class 600 +80%
Peek	This material offers a unique combination of chemical, mechanical, electrical, and thermal properties. The only solvents which will attack Peek is concen- trated nitric acid & sulfuric acid. It will withstand temperatures up to 600°F and pressures up to 4500 psi.	Black	+60%
Cryo-Tek	Cryo-Tek is a form of modified PTFE, which contains bronze and other cryogenic fillers, specially suitable for LOX service. Excellent seat mate- rial for difficult applications. Temperature Range -400°F to 400°F.	Bronze	+30%
Reinforced TFE	This is produced by adding 15% fibrous glass or carbon to Virgin Teflon and has a greater pressure temperature rating than Teflon up to 420°F. They also have a better cycle life than Teflon.	Off- White	Standard as indicated in literature
Stainless Filled PTFE (S-Tek)	S-Tek (stainless filled PTFE) combines the strength of metal with the lubricity of PTFE. 50% 316 powder combined with 50% PTFE. Offers the abrasion resistance of metal with higher pressure and temperature ratings than RPTFE. Temperature rating -20° to 550° / Steam rating 250 SWP.	Dark Gray	+50%
Virgin TFE	This is the most widely used seating material and is excellent for most services. It has excellent chemical resistance throughout valve industries and a low coefficient of friction. Temperature Range -50°F to 450°F.	White	Standard as indicated in literature
UHMW Polyethylene	UHMW polyethylene is used for highly radioactive materials where PTFE is not acceptable (> 104 rads) and is rated 2 x 107 rads. These seats also meet the requirements of the tobacco industry whenever PTFE is prohibited, and are especially well-suited for handling highly abrasive media. Temperature Range -70°F to 200°F, not suitable for steam.	Opaque White	+40%
Devlon	Devlon material is one of the toughest and hardest wearing thermoplastics available. It provides wear resistance, impact strength, and moisture absorption properties. Devlon is used in many valve seats which require a broad range of working temperatures, excellent corrosion resistance and outstanding resistance in high pressure applications. Temperature Range -50°F to 350°F.	Yellow	+40% if not listed as standard material and indicated in literature
Super-Tek II	Carbon/Graphite Filled TFM offers exceptional chemical & heat resis- tance properties. It has a low coefficient of friction for lowering valve torque. It is good for service temperatures ranging from -320°F to 550°F	Black	+10%
Super-Tek III	This is a Teflon base filled with glass amorphour carbon powder and graphite. It has lower thermal contraction-expansion rate than PTFE and is ideal for steam or thermal fluid applications up to 550°F. Super-Tek III is also good for Cryogenic applications as low as -300°F.	Black	+40%

Cavity Filler	Designed to reduce the possibility of contamination by entrapment of process fluids in the void normally found behind the ball between the valve body in conventionally designed ball valves. Ideal for application where cross contamination is a concern, such as paints or dyes. Available in most seating materials.	White	+50%
DELRIN	This seat is very rigid and does not undergo cold flow. It can withstand pressures of up to 6000 psi dependent on valve size and a temperature range of -70°F to 180°F. Delrin also withstands nuclear radiation at doses of up to 106 rads. Do not use for oxygen service or steam.	White	+50%
Nylon	Special Nylon seats are offered for higher pressure and lower temperature service. It can be used in high-pressure air, oil and other gas media but are not suited for strong oxidizing agents. Temperature rating -30°F to 200°F.	Translucent White	+40%

SEAL SELECTIONS

Material	Technical Description	Color
GRAPHOIL	Usable from -70° to 1000°F on almost any media. It is the standard seal on all fire rated valves.	Black
Reinforced TFE	This is produced by adding 15% fibrous glass to Virgin Teflon and has a greater pressure temperature rating than Teflon. It also have a better cycle life than Teflon.	Off- White
Stainless Filled TFE	Combines the strength of metal with the lubricity of TFE. 50% 316 powder combined with 50% TFE. Offers the abrasion resistance of metal with higher pressure and temperature ratings than RPTFE. Temperature rating -20°F to 550°F / Steam rating 250 SWP.	Gray
Virgin TFE	Teflon is excellent at pressures below 1500 psi & at temperatures from -20°F to 400°F. It will not withstand temperature fluctuations in excess of 200°F & are not reusable. It has excellent resistance to a wide range of chemicals.	White
UHMW Polyethylene	This is rated to 1500 psi at temperatures from -70° to 200°F. This can be used in low to medium level radiation services and in applications where fluorocarbons can not be tolerated. Abrasion resistance is very good.	Opaque White
Viton	These body seals are excellent at all rated pressures with a temperature range of -20° to 400°F. Viton is the best elastomer seal for higher temperature applications, BUT IT SHOULD NOT BE USED ON STEAM.	Black
Spiral Wound Wire Graphite	Manufactured by spirally winding a preformed V shape SS316 metal strip and a graphite sealing filler in combination. This gasket has adequate flexibility and recovery to maintain a seal under variable and uneven loading, pressure, temperature fluctuation, bolt stress relaxation, and creep. Temperature range from -320° to +1000°F.	Black

Pressure Relieving & Equalizing Seat Design



Pressure Temperature Chart

