



## State of The Art Valve Seating

### SUPER-TEK HIGH PERFORMANCE VALVE SEATING

*Flo-Tite's Super-Tek, TFM* seating material is a higher strength granular modified PTFE, state of the art product. The chemical resistance of PTFE is unchanged, while adding many important benefits that will allow Super-Tek to perform in difficult services such as styrene and butadiene, which can polymerize and “popcorn” standard PTFE seats. It provides excellent service at elevated temperatures while providing low operating valve torques.

### ADVANTAGES OVER PTFE

#### SUPER-TEK

- Super-Tek has a much more dense and a more homogeneous microstructure than PTFE.
- Greater Molecular Weight & Improved Densification
- Improved toughness
- Micro-Porosity reduced
- Improved creep, cold-flow performance
- Substantially lower deformation under load
- Excellent corrosion resistance
- Lower permeability
- Good electrical and mechanical properties
- Reduces valve operating torques
- Extends the pressure temperature range of soft seated Ball Valves from -320°F (-196°C) to 500°F (260°C)

#### SUPER-TEK III

Super-Tek III is a Teflon base filled with 25% amorphous carbon powder reinforced TFM offering the advantages of TFM but with an extended temperature range and added abrasion resistance. Ideal for rapid, high cycle applications, higher-pressure steams, hot gases, thermal fluids and a variety of process chemicals. Super-Tek III is an excellent alternative for Peek. It can be used for cryogenic service also.

- Temperature range from -300°F to 550°F
- Note operating valve torque is increased by approximately 40% above Super-Tek

**This product is another example of Flo-Tite's refinement of the basic ball valve.**

Super-Teks high temperature capabilities allow weld end ball valves to be welded to the piping system without disassembly following special welding procedures. This unique advantage results in ease of installation and cost savings while insuring full integrity of the factory assembled and tested valve.

**Exceptional sealing characteristics unaffected by virtually all Processing Medias.**

## TECHNICAL ADVANTAGE AND APPLICATION

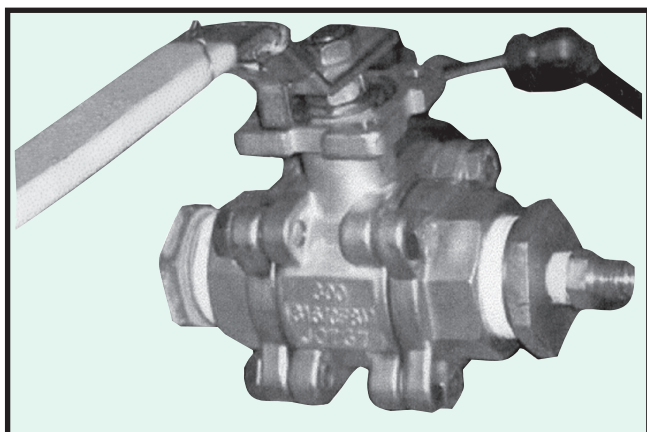
Flo-Tite continues to look for innovative solutions to enhance and extend the service characteristics of its ball valves with the addition of Super-Tek and Super-Tek III.

Super-Tek III on the appropriate ball valves offer you new opportunities for soft seated Ball Valves - where never before possible.

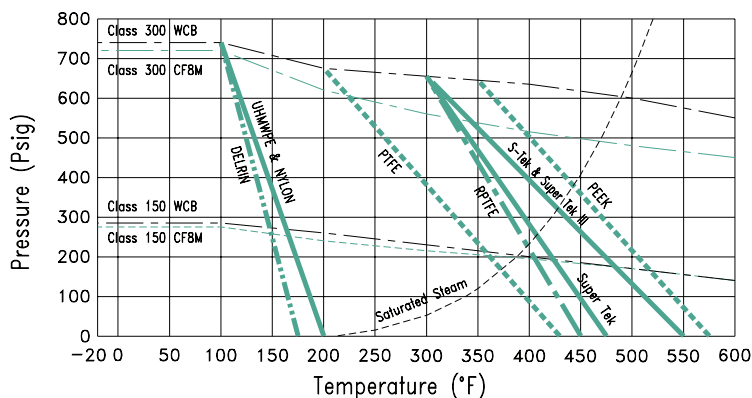
DATA SHEET					
<b>Customer:</b> Flo-Tite Valves & Controls, Inc.					
<b>Product Description:</b> 1 inch 1500 WOG 3-Piece Ball Valve with TFM Seats					
<b>Project Number:</b> 20374					
<b>Test Media:</b> Air					
<b>Test Results:</b> The average and maximum leakage results shown below were calculated from 60 readings measured during a minute duration. See data sheets for more detailed information.					
Temperature (F)	Cycle Number	Pressure (psig)	Operating Torque (in-lb)	Ball Displacement (inches)	Seat Leakage (ml/min)
Ambient	0	0	20	-	-
Ambient	0	1500	30	0.005	-
Ambient	10	0	2	-	-
Ambient	10	1500	32	0.005	0.0
350	10	0	18	-	-
350	20	0	12	-	-
350	20	1295	30	0.015	0.2
600	20	0	16	-	-
600	20	1095	32	0.019	0.0
600	30	0	16	-	-
600	30	1095	32	0.019	0.0
Ambient	30	0	10	-	-
Ambient	30	1500	100	0.020	0.0
Ambient	40	0	10	-	-
Ambient	40	1500	120	0.020	0.0*

**Flo-Tite valves are performance tested and certified by outside testing labs. This data sheet is an example of the extreme conditions that the Flo-Tite valves are tested to.**

Flo-Tite's Super-Tek III closes the gap between reinforced Teflon and the high cost for PEEK seats. Most RPTFE seats max out at 450°F, while Super-Tek III approaches 550°F. Each customer's unique application cannot be duplicated in our testing labs. Flo-Tite's experienced staff will be pleased to work one on one with our customers to ensure they get the right product. Samples will also be provided when needed.



### Pressure Temperature Chart



#### Selection, Installation, Operation and Maintenance

Although Flo-Tite can, and often does, provide general guidelines, it is obviously not possible to provide application specific data and warnings for all conceivable applications. The purchaser/end user must therefore assume the ultimate responsibility for the proper selection, installation, operation and maintenance of the products. Before installing, operating or repairing any valve, the purchasers/end user should train its employees and/or contractors in the safe use of the Flo-Tite products in connection with the purchaser's manufacturing processes.

**NOTE: Exact pressure/Temperature ratings of Flo-Tite's Super-Tek seat materials described in this bulletin are shown in the applicable valve bulletins found in the Flo-Tite Catalog.**

*This brochure is general in nature and manufacturer reserves the right to alter dimensions, materials or to make design improvements.*



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Due to continuous development & improvement of our product range, we reserve the right to alter the dimensions and technical data included in this brochure