



Jorlon is a structurally modified PTFE with FDA and CFR 21CFR177.1550, USP <88> Class VI, and USP <87> approval. It is specially manufactured under a proprietary process where PTFE layers are combined and formed to reduce creep and cold flow as seen with conventional PTFE or Teflon. A table of physical properties and compliance facts are available on the following page.

Jorlon is featured in five of Steriflow's seven hygienic product lines:

- Mark 978 Control Valves
- Mark 96 Pressure Regulating Valves
- Mark 95 Back Pressure Regulating Valves
- Mark 96A Air Loaded Regulators
- Mark 96A Remote Operated Back Pressure Regulating Valves

Customer Use and Product Applications Facts

- Steriflow has been utilizing this material in our sanitary modulating valves for over seven years.
- Since its inception, several thousand Steriflow valves with Jorlon diaphragms have been supplied to customers into systems which have been validated by the FDA.
- Jorlon has been specified in biopharm applications including (but not limited to) WFI, clean steam (up to 100 psig), buffers, acids, cryogenic liquids, clean utility gas, biological intermediates and final process fluids.
- To date not one valve has been returned due to diaphragm failure, nor have we been notified of any diaphragm or diaphragm-related failure.
- Jorlon diaphragms have been used by Jordan Valve (our parent company) in industrial control valves and regulators for even longer, on higher pressures and temperature and on tens of thousands of valves with the same results.

Laboratory Pressure and Cycle Testing

Steriflow Valve: Sanitary Valve Testing

- Jorlon has been tested in a variety of Steriflow control valves on 45 psig continuous steam service to over 1 million full stroke cycles.
- Steriflow recently tested Jorlon's capability under vacuum service. We duplicated the steam induced vacuum conditions that resulted in the repeated failure of a competitor's EPDM/Nomex/Teflon diaphragm on a Lyophilization process. Steriflow tested the 3" Mark 978 with Jorlon diaphragm at 45 psig steam and periodically vacuum cycled the valve for 100 cycles without a single failure.
- Lab tests comparing Jorlon to 316L diaphragms have shown continued life after exceeding the SST failure cycle count by more than 100 times.
- Jorlon has been nitrogen pressure tested to over 1200 psi without failure.

Jordan Valve: Industrial Regulators and Control Valve Testing

- Jorlon diaphragms have been full-stroke cycle tested on 400+ psi saturated steam for an extended period of time and pressure tested with nitrogen up to 3000 psi without failure.



Jorlon Fact Sheet

Physical Properties and Regulator Compliance		
		Jorlon Diaphragm
Color		Clear, translucent
Composition		PTFE
Temperature	Maximum	500°F
Creep Relaxation (ASTM F38)	%	35
Specific Gravity (D792)		2.19
Compressibility (ASTM F36)	% Range	20 - 25
Recovery (ASTM F36)	Min. %	50
Tensile Strength (ASTM D1708)		
X Direction	psi (N/mm ²)	5000 (35)
Y Direction	psi (N/mm ²)	5100 (36)
Ultimate Elongation (ASTM D1708)		
X Direction	%	500
Y Direction	%	520
Gas Permeability (ASTM D1434V)	Cc/M ² /24 hrs	10,000
Flammability		Will not burn

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