

Diaphragm Direct® Bio-Pharma Diaphragms

TFM™ (PTFE) backed Silicone (VMQ) Diaphragm

Diaphragm Direct® TFM™ (PTFE) backed Silicone (VMQ) diaphragm was developed specifically for Biopharmaceutical process applications that have extended exposure to high temperatures as those found during steam sterilization.

GRADE: TFM™ (PTFE) backed Silicone (VMQ)

MATERIAL: Modified PTFE (TFM)™ with Silicone – Black Dicumyl peroxide cured

SIZE: DN8-150 (1/4" – 6")

TEMPERATURE RATING:

Maximum constant 175°C (347°F)
Maximum intermittent 175°C (347°F)
Minimum temperature -20°C (-4°F)

REGULATORY COMPLIANCE:

- FDA 21 CFR 177
- USP Class VI, <87>, <88>
- ASME BPE part SG
- Certified ADCF (Animal Derived Ingredient Free)
- Fully lot traceable to EN 10204 3.1

KEY FEATURES INCLUDE:

- Ideal for steam distribution and supply, sterile barrier, block & bleed applications, and process lines subjected to long duration steam cleaning.
- Enhanced high temperature performance and improved resistance to long term exposure at high temperatures.
- Reduced requirement for re-torquing fasteners after thermal cycling due to improved seal-to-atmosphere performance.

WHY USE A SILICONE BACKING

Silicone has excellent thermal properties and can withstand very high temperature for extended periods of time without deterioration.

Compared to EPDM and other elastomers, silicone offers outstanding resistance to compression set (the loss of recovery that elastomers suffer from being compressed). Silicone not only has an overall better resistance to compression set, it also features exceptional thermal and anti-aging properties.



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TFM™ (PTFE) backed Silicone Design Features (2-Piece Construction)

TFM™ (PTFE) WETTED FACE

- Optimum ratio of crystalline and amorphous micro-structure
- Reduced creep and cold flow at elevated temperatures
- Greater dimensional stability and crack resistance
- Enhanced surface finish integrity to assist purity

SILICONE BACKING CUSHION

- Dicumyl peroxide cured
- Excellent mechanical and thermal properties
- Outstanding resistance to compression set
- Fabric reinforced to optimize flex performance and diaphragm longevity

DIAPHRAGM TRACEABILITY

All diaphragm materials and physical properties are batch traceable with permanent codes molded onto the diaphragm. Molded information includes: Manufacturing Date/Cure Date, material grade, and diaphragm size.

Diaphragm Direct® offers the BEST VALUE in replacement diaphragms. Performance, reliability, regulatory conformance, and continuous third party tested per ASME BPE Elastomer standards



TFM™ (PTFE) offer improved sealing and flex life. All elastomer backing cushion have high performance woven fabric reinforcement.

