

Sanitary Seal Division

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Sanifluor® 1000 (Formulated Aflas® Elastomer) FDA and USP O-Rings, Gaskets, Seals and Valve Seats

Specifically Compounded For Pharmaceutical and Sanitary Applications

- Excellent Steam and Caustic Resistance up to 450 F (230 C)
- Very Good Chemical Resistance
- TOCs and Metal Extractables much lower than Viton® compounds
- Longer Life in SIP, CIP and WFI Applications
- FDA and USP Compliant
- Gamma-Ray Radiation Resistant

O-Rings, Gaskets and Seals produced from Sanifluor® 1000 have excellent chemical, heat and steam resistance. They provide superior performance in hot water, steam and virtually all caustics making them ideal for pharmaceutical, medical, biotechnology, food, beverage and cosmetic manufacturers who use steam or caustic chemicals or a combination of both in their sterilization process. These very aggressive conditions can be too harsh for commonly used sealing materials such as Silicone, EPDM and FKM. Sanifluor® provides excellent performance in SIP (steam in place), CIP (clean in place) and WFI (water for injection) applications.

Sanifluor® 1000 is formulated for use in gaskets and seals where both USP and FDA compliance are required.** Sanifluor® 1000 meets the extractive requirements of FDA 21CFR177.2600 sections (e) and (f). It also complies with 3-A Sanitary Standard for multiple-use rubber materials. Additionally, Sanifluor 1000 has been tested per the United States Pharmacopeia (USP) testing protocols <87> and <88> and is compliant with the requirements of the USP Class VI Polymer.

Sanifluor® 1000 is available in all sanitary gasket sizes for Tri-Clover® Tri-Clamp® fittings and AS-568A O-Ring sizes. A metal detection Sanifluor® compound is also available.

TYPICAL PROPERTIES

Physical Properties	ASTM Method	Typical Value
Color		Black
Specific Gravity	D297	1.65
Hardness, Shore A. Points	D2240	80
Elongation @ Break %	D1414	170
Modulus @ 50% Elongation, psi	D1414	845
Modulus @ 100% Elongation, psi	D1414	1710
Tensile Strength @ Break, psi	D1412	2600
Service Temperature Range, °F		23° to 450°F
Service Temperature Range, °C		-5°C to 230°C
Compression Set @ 25% Deflection 70Hours @ 392° F/200°C, in Air % of original deflection	D395 Method B	32

**On July 23, 2009, The U.S. Food and Drug Administration (FDA) confirmed the compliance of Sanifluor 1000 for repeated use in contact with food by publication of Food Contact Substance Notification (FCN) 000891.

All tests conducted on AS 568 (-214) O-rings

AFLAS® is a registered trademark of Asahi Glass Co., Ltd Sanifluor® is a registered trademark of Process Technologies, Inc.

Viton® is a registered trademark E. I. du Pont de Nemours and Company

Statements and recommendations in this publication are based on our experience and knowledge of typical applications of this product and shall not constitute a guarantee of performance nor modify or alter our standard warranty for this product. Prior to actual use it is highly recommended that suitable tests be run to determine this product's suitability in a specific application. This is critical where failure could result in injury or damage.



Compatibility Guide for Common Chemicals Used in CIP Processes

	EPDM	BUNA-N	Silicone	FKM	Sanifluor®	Viton® X	PTFE	Tyfluor
Acetone	1	4	4	4	4	2	1	1
Ammonia	1	2	2	4	4	4	1	1
Hydrochloric Acid	3	4	4	1	1	1	1	1
Hydrofluoric Acid	3	4	4	3	2	3	1	1
Hydrogen Peroxide	4	2	2	2	1	1	1	1
Isopropyl Alcohol	1	2	1	1	1	1	1	1
Nitric Acid	2	4	2	1	2	1	1	1
Phosphoric Acid	1	2	2	1	1	1	1	1
Sodium Hydroxide	1	2	2	2	1	1	1	1
Sodium Hypochlorite	2	2	2	1	1	1	1	1
Sulfuric Acid	2	3	4	1	1	1	1	1
Steam to 400°F (204°C)	3	4	4	4	1	3	3	3

1 – Excellent 2 – Good 3 – Limited 4 – Not Recommended

Viton® is a registered trademark of DuPont Performance Elastomers

Part Numbers for High Performance Sanitary Gasket Materials

	1"	1½"	2"	2½"	3"	4"
Viton® X	40MP-FLX 1	40MP-FLX 1½	40MP-FLX 2	40MP-FLX 2½	40MP-FLX 3	40MP-FLX 4
Sanifluor®	40MP-FEP 1	40MP-FEP 1½	40MP-FEP 2	40MP-FEP 2½	40MP-FEP 3	40MP-FEP 4
Tyfluor™	40MP-TY 1	40MP-TY 1½	40MP-TY 2	40MP-TY 2½	40MP-TY 3	40MP-TY 4

Part Numbers for Standard Sanitary Gasket Materials

	1"	1½"	2"	2½"	3"	4"
Buna-N	40MP-U 1	40MP-U 1½	40MP-U 2	40MP-U 2½	40MP-U 3	40MP-U 4
Silicone White	40MP-FXW 1	40MP-FXW 1½	40MP-FXW 2	40MP-FXW 2½	40MP-FXW 3	40MP-FXW 4
Silicone Clear	40MP-FXC 1	40MP-FXC 1½	40MP-FXC 2	40MP-FXC 2½	40MP-FXC 3	40MP-FXC 4
EPDM	40MP-E 1	40MP-E 1½	40MP-E 2	40MP-E 2½	40MP-E 3	40MP-E 4
Viton®/ FKM	40MP-SFY 1	40MP-SFY 1½	40MP-SFY 2	40MP-SFY 2½	40MP-SFY 3	40MP-SFY 4
PTFE	40MP-G 1	40MP-G 1½	40MP-G 2	40MP-G 2½	40MP-G 3	40MP-G 4