

# Sanitary Seal Division

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## Viton<sup>®</sup> Extreme<sup>™</sup> Compound 2001 Sanitary Gaskets/O-Rings

Process Technologies' Viton<sup>®</sup> Extreme<sup>™</sup> sanitary gaskets and O-Rings are produced from formulated Viton<sup>®</sup> Extreme<sup>™</sup> ETP-600S fluoroelastomer. This unique material is produced with Advanced Polymer Architecture. (APA) It represents a proprietary advance in fluoroelastomer technology developed by DuPont Performance Elastomers.

Viton Extreme sealing elements exhibit excellent resistance to steam and to attack by an exceptionally broad variety of chemicals and fluids. They can solve the most challenging chemical applications in the pharmaceutical and bio-technology industries.

Sterilization processes used by pharmaceutical, biotechnology, food and beverage manufacturers frequently use steam or caustic chemicals or a combination of both. These aggressive conditions put special demands on commonly used sanitary gasket materials such as EPDM, silicone, PTFE and bisphenol-cured FKM. EPDM is capable of providing excellent steam resistance, but exhibits relatively poor resistance to some commonly used cleaning fluids. Seals made with silicone may provide good resistance to a wide variety of cleaning fluids, but have relatively poor steam resistance. PTFE seals offer excellent resistance to steam and chemical attack, but, because of their plastic nature, can creep under stress. Bisphenol-cured FKM has good steam resistance but is less resistant to some caustic sterilization processes.

Process Technologies offers its Viton Extreme compound 2001 in all sanitary gasket sizes for Tri-Clover<sup>®</sup> Tri-Clamp<sup>®</sup>.

### PRODUCT FEATURES

TYPICAL PROPERTIES	ASTM Method	Typical Value
<b>Physical Properties</b>		
Color		Black
Hardness, Shore A. Points	D2240	75
Modulus @ 100% elongation	D412	1079
Elongation, %	D412	198
Tensile Strength @ Break, psi	D412	2315
Service Temperature Range, °F		-15°F to 392°F
Service Temperature Range °C		-26°C to 200°C
Compression Set @ 25% Deflection 70 Hours @ 3392° F/200°C, in Air, % of original deflection	D395	27

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.

\*\*FDA repeat use food contact compliance with limitations/specifications for Viton<sup>®</sup> Extreme<sup>™</sup> ETP-600S is outlined in Food Contact Notification (FCN) 539. Information relative to FCN 539 can be reviewed at FDA's website of effective notifications for food contact substances: [www.cfsan.fda.gov/~dms/opa-fcn.html](http://www.cfsan.fda.gov/~dms/opa-fcn.html)

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.\*\*FDA repeat use food contact compliance with limitations/specifications for Viton<sup>®</sup> Extreme<sup>™</sup> ETP-600S is outlined in Food Contact Notification (FCN) 539. Information relative to FCN 539 can be reviewed at FDA's website of effective notifications for food contact substances: [www.cfsan.fda.gov/~dms/opa-fcn.html](http://www.cfsan.fda.gov/~dms/opa-fcn.html)

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## 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