

Fluolion[®]

900



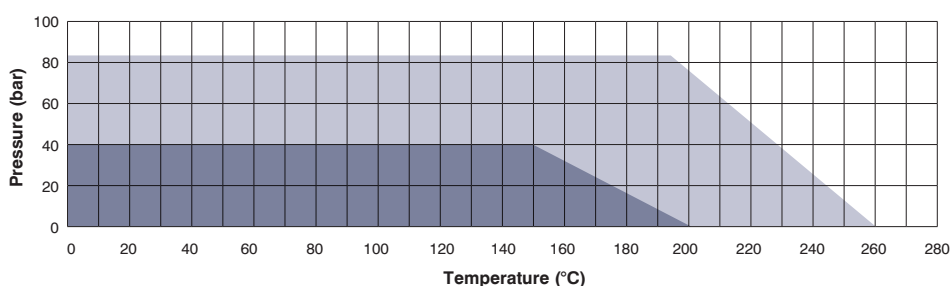
Structured PTFE filled with silica

Fluolion[®] 900 is a structured virgin PTFE filled with silica. The sheets are manufactured by a unique process which overcomes the creep relaxation and cold flow problems typically associated with skived PTFE sheets and gaskets.

Application guidelines

Fluolion 900 is suitable for use in applications found in chemical processing and hydrocarbon plants. Fluolion 900 is suitable for use in strong acids (except hydrofluoric), solvents, hydrocarbons, water, steam and chlorine. For more detailed information regarding chemical compatibility, it is recommended that the James Walker Chemical Compatibility Guide or our technical team is consulted, particularly for extremely aggressive media.

* 3rd party tested and validated by James Walker for use in hydrogen service.



Pressure versus temperature capability graph

The Pressure x Temperature graph indicates the service limits considering the simultaneous influence of temperature and pressure. The darker shaded area represents the normal safe limitation for the combinations of temperature and pressure. It is recommended that, for all applications falling outside the darker shaded area, you seek guidance from James Walker to assess the suitability of the material in your specific application. Sealed media may influence the service limits in a specific application. Please contact James Walker for confirmation of suitability.



TEMPERATURE

Maximum Temperature:
+260°C (+500°F)

Minimum Temperature:
Cryogenic and below



PRESSURE

Maximum Pressure:
8.3 MPa/83 bar (1203 psi)



CHEMICAL COMPATIBILITY

pH 0-14

APPROVALS

Shell MESC SPE 85/300 - 3.3.2
(EC) Nr. 1935/2004
(EC) No. 2023/2006
(EU) No. 10/2011
U.S. FDA 21 CFR 170.39

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Typical physical properties

Property	Test method	Parameters	Typical physical property
Colour	-	-	Beige
Compressibility	ASTM F36M	34.5 MPa	5% - 10%
Recovery	ASTM F36M	34.5 MPa	40%
Tensile strength	ASTM F152	-	14 MPa (2030 psi)
Creep relaxation	ASTM F38	100°C (212°F)	18%
Residual stress	DIN 52913	-	16 MPa (2320 psi)

Typical performance

Leakage rate	DIN 3535-6	N ₂ , 40bar	< 0.01ml/minute
Specific leakage rate	VDI 2440 / TA Luft	-	1.1 x 10 ⁻⁶ mbar.l/(s.m)

Gasket factors according to DIN28090-2			
Compression εKSW	DIN 28090-2	RT	> 1.5%
Creep relaxation εKSW	DIN 28090-2	RT	> 0.5%
Compression εKSW	DIN 28090-2	Elevated temperature	< 20%

ASME gasket factors		
	1.5 mm thick	3.0 mm thick
Gasket factor "m"	4.4	3.5
Minimum gasket stress "y"	15.9 MPa (2300 psi)	17.2 MPa (2500 psi)

Availability

Sheet size	Thickness
1200 mm x 1200 mm	1.0 mm
1500 mm x 1500 mm	1.5 mm, 2.0 mm, 3.0 mm

Statements of compliance to regulations for food and pharmaceutical use are available on the James Walker website.

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Health warning: If PTFE products are heated to elevated temperatures, fumes will be produced which may give unpleasant effects, if inhaled. Whilst some fumes are emitted below 300°C (572°F) from PTFE, the effect at these temperatures is negligible. Care should be taken to avoid contaminating tobacco with particles of PTFE or PTFE dispersion, which may remain on hands or clothing. Safety Data Sheets (SDS) are available on request.

Information given in this publication is given in good faith and represents the results of specific individual tests carried out by James Walker or third parties in accordance with the methodologies described in this publication, performed in a laboratory. No representation or warranty is given in relation to such information. Values and/or operating limits given in this publication are not an indication that these values and/or operating limits can be applied simultaneously. While such results may comprise useful additional information and are industry standard tests, they are no substitute for conducting (or procuring from James Walker) your own tests and engineering analysis and satisfying yourself as to the suitability of the product you select. Please also note that a product tested in accordance with the published methodology may not perform to such values in application and/or under different test conditions or methodologies for a variety of reasons, including but not limited to the environment in which it is used/tested or which passes through it or otherwise affects the product, or due to the handling, storage or installation, or due to the effect of housing or other parts. Our personnel will be happy to discuss any historical examples we have of a product having been previously used in a particular application.

To ensure you are working with the very latest product specifications, please consult the relevant section of the James Walker website: www.jameswalker.biz.

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