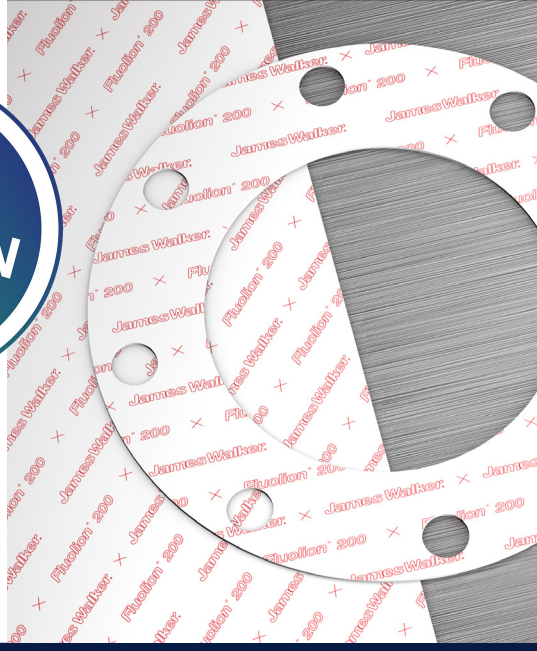
Fluolion®
200

H2 PROVEN*



Virgin expanded PTFE

Fluolion® 200 is 100% pure virgin multi-directionally expanded PTFE sheet material.

Application guidelines

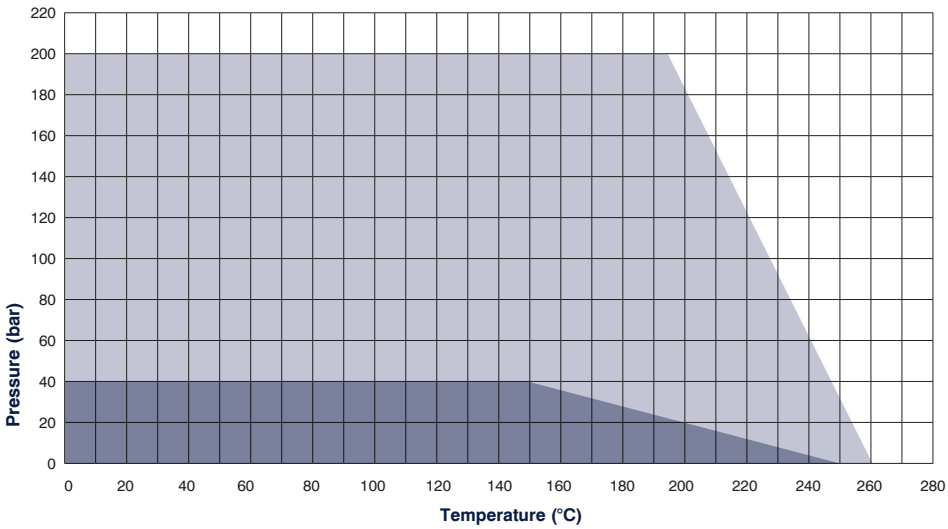
Fluolion 200 is suitable for use on most flange types including all standard flange designs and covers a wide range of media and temperatures. The multidirectional expansion of Fluolion 200 produces exceptional mechanical strength allowing operation with minimal creep at elevated temperatures.

The conformability of the Fluolion 200 material allows the material to be used on flanges with small areas of minor damage and/or irregularities.

Fluolion 200 is inherently clean and non-toxic and complies with FDA regulations for food and it is physiologically harmless.

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:
20 MPa/200 bar (2900 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 177.1550

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Typical physical properties

Property	Test method	Parameters	Typical physical property
Colour	-	-	White
Compressibility	ASTM F36M	34.5 MPa	> 45%
Recovery	ASTM F36M	34.5 MPa	> 10%
Tensile strength	ASTM F152	-	> 20 MPa (2900 psi)
Creep relaxation	ASTM F38	100°C (212°F)	≤ 22%
Residual stress	DIN 52913	-	> 15 MPa

Typical performance

Leakage rate	DIN 3535-6	N_2, 40bar	< 0.01ml/minute
Specific leakage rate	VDI 2440 / TA Luft	-	8.0 x 10^{-7}mbar.l/(s.m)

Gasket factors according to DIN28090-2			
Compression εKSW	DIN 28090-2	RT	35% - 40%
Creep relaxation εKSW	DIN 28090-2	RT	> 3%
Compression εKSW	DIN 28090-2	Elevated temperature	< 15%

ASME gasket factors	
	3.0 mm thick
Gasket factor “m”	2
Minimum gasket stress “y”	19.3 MPa (2800 psi)

Availability

Sheet size	Thickness
1500 mm x 1500 mm	0.5 mm, 1.0 mm, 1.5 mm, 2.0 mm, 3.0 mm, 4.0 mm, 5.0 mm, 6.0 mm

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