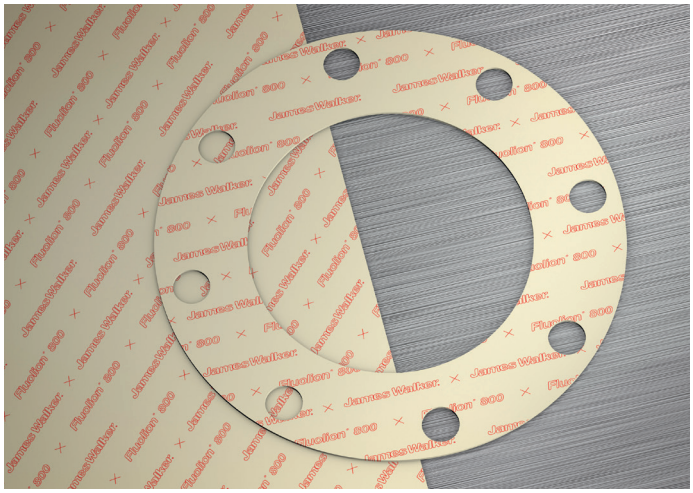
James Walker®

Fluolion® 800

Issue 1



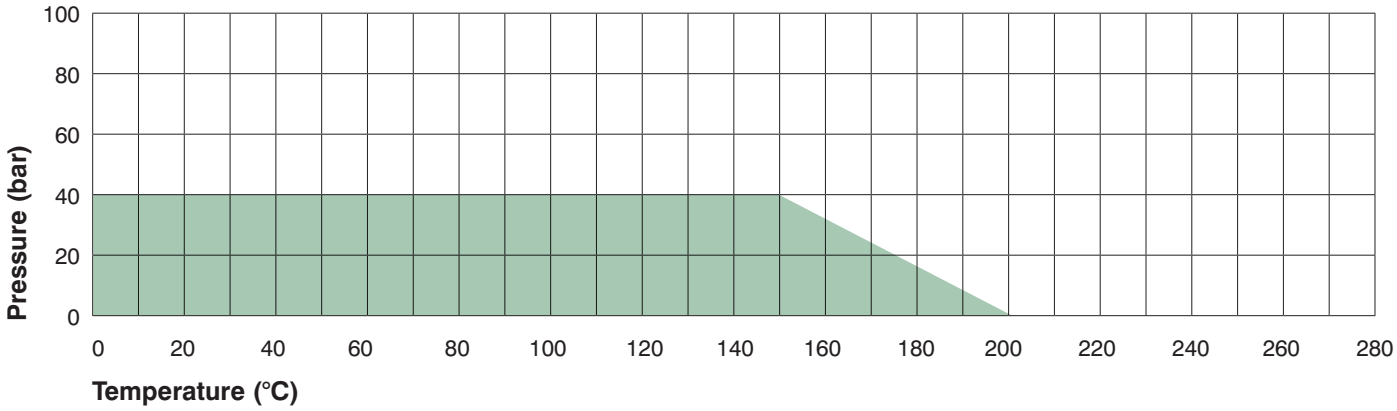
Description

Fluolion® 800 is a structured virgin PTFE filled with barium sulphate. 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 800 is a universal gasket sheet material suitable for use in a wide variety of aggressive media including most acids, caustics, hydrocarbons, refrigerants, solvents, steam and water. Fluolion 800 is suitable for applications with the toughest demands on purity. 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.

Temperature	Maximum	+260°C (+500°F)
	Minimum	-268°C (-450°F)
Pressure	Maximum	8.3MPa (1203psi, 83bar)
Chemical compatibility	pH	0 -14



Pressure versus temperature capability graph

The Pressure x Temperature graph indicates the service limits considering the simultaneous influence of temperature and pressure. The green area represents the normal safe limitation for the combinations of temperature and pressure. It is recommended that, for all applications falling outside the green 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.

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Typical Physical Properties

Property	Test Method	Parameters	Typical Physical Property
Colour	-	-	Off-white (No dye)
Compressibility	ASTM F36M	34.5MPa	4% - 10%
Recovery	ASTM F36M	34.5MPa	40%
Tensile strength	ASTM F152	-	14MPa (2030psi)
Creep relaxation	ASTM F38	100°C (212°F)	24%
Residual stress	DIN 52913	-	16MPa (2320psi)

Typical Performance

Leakage rate	DIN 3535	N_2, 40bar	<0.01ml/min
Specific leakage rate	VDI 2440/ TA Luft	-	5.90 x 10^{-7}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	< 30%

ASME gasket factors		
	1.5mm Thick	3.0mm Thick
Gasket factor “m”	2	2
Minimum gasket stress “y”	12.4MPa (1800psi)	10.3MPa (1500psi)

Availability

Gaskets cut to any shape or size up to maximum sheet size and larger for segmented gasket products

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

Information

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 from PTFE, the effect at these temperatures is negligible. Care should be taken to avoid contaminating tobacco with particles of PTFE, or with 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 performed in a laboratory by James Walker or third parties in accordance with the methodologies described in this publication. 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 your own tests and engineering analysis and satisfying yourself as to the suitability of the material or product you select.

Please also note that a material or product tested in accordance with the quoted methodology may not perform to such values in application and/or under different test conditions or methodologies for a variety of reasons. These include, but are not limited to, the effects of: The environment in which the material or product is used/tested; the media with which it comes into contact; storage, handling and installation processes; interactions with housings and other parts or, in the case of materials, the design of any product made from that material. Our personnel will be happy to discuss any historical examples we have of the material or 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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