

# Sentinel® X

Compressed aramid fibres with functional fillers and nitrile binder

**Sentinel® X is James Walker's general purpose sheet jointing and complies with the test requirements of BS7531 Grade Y.**

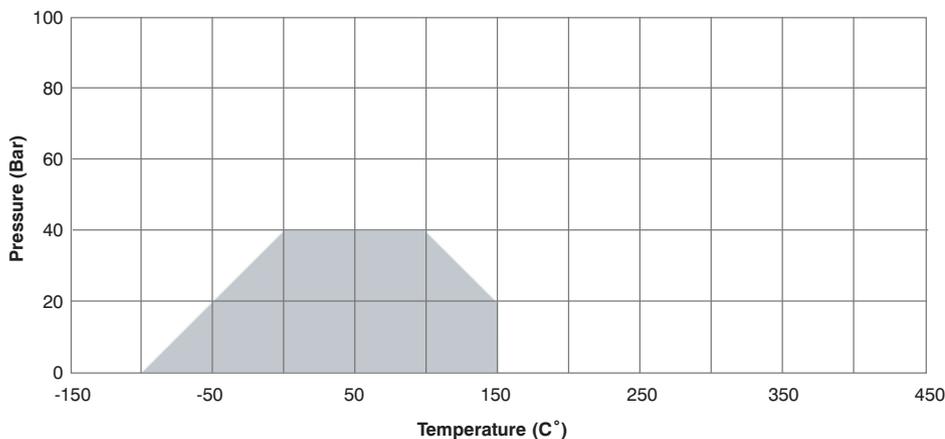
It is comprised of compressed aramid fibres and a combination of other functional fillers with a nitrile (NBR) rubber binder. The material is supplied with an anti-stick finish to both surfaces as standard, which minimises adhesion of the gasket to flange surfaces even at elevated temperatures, resulting in reduced removal time.

## Application Guidelines

- Media compatibility with oils, fuels and hydrocarbon compounds
- Resistance to solvents, refrigerants, water and steam
- Can be used on the majority of flange specifications including ASME, API, EN, BS and DIN

## TA Luft

Complies with the tightness criteria of  $10^{-4}$  mbar.l/m.s of VDI Guideline 2200 and VDI Guideline 2440.



## Pressure versus temperature capability graph

Pressure x Temperature curve indicates the service limits considering the simultaneous influence of temperature and pressure. The shaded area represents the normal service limits for non-critical media (excluding steam) for 2 mm thick material.

For other thicknesses these limits may vary. James Walker would strongly suggest that for all applications that fall outside of the shaded area you seek guidance from James Walker to assess the suitability of the material in your specific application.

Media compatibility has not been assumed and may influence the service limits in a specific application. Please contact James Walker for confirmation of suitability.

**James Walker**



## TEMPERATURE

**Maximum Temperature:**  
+400°C (+752°F)

**Minimum Temperature:**  
-200°C (-328°F)



## PRESSURE

**Maximum Pressure:**  
10 MPa/100 bar (1450 psi)  
ASME B16.5 Class 600

## APPROVALS



WRAS approved for use with cold and hot potable water up to 85°C (185°F).

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## Typical physical properties

Property	Test method	Parameters	Typical physical property
Colour	-	-	Yellow
Density	DIN 28090-2	-	1.85g/cm <sup>3</sup>
Compressibility	ASTM F36J	34.5 MPa	9%
Recovery	ASTM F36J	34.5 MPa	45%
Tensile strength (Transverse)	DIN 52910	-	7.5 MPa (1090 psi)
Residual stress	DIN 52913 (2 mm Thickness Sample)	175°C / 50 MPa	27 MPa (3916 psi)
		300°C / 50 MPa	22 MPa (3190 psi)
	BS 7531 (1.5 mm Thick Sample)	300°C / 40 MPa	28 MPa (4060 psi)
Leachable chloride content	ISO 10304-1		< 100 ppm

## Typical performance

Leakage rate	DIN 3535-6	N <sub>2</sub> , 40 bar	< 0.1 mg/m/s
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Fluid resistance (2 mm sample)			
IRM 903 weight change	ASTM F146	5 Hr@150°C	10%
IRM 903 thickness change		5 Hr@150°C	4%
ASTM fuel B weight change	ASTM F146	5 Hr@23°C	11%
ASTM fuel B thickness change		5 Hr@23°C	9%

*Gasket material performance is ultimately dependent on the use of the correct flange design standards and fitting procedures plus appropriate gasket design and manufacturing process.*

## Availability

Sheet size	Thickness
2000 mm x 1500 mm; Other sizes can be considered upon request	0.5, 0.8, 1.0, 1.5, 2.0, 3.0 mm