

## Fire-Safe Certified Gaskets

- ***Certified to API 607 – ISO 10497***
- ***Suitable for high pressure applications***
- ***PTFE inner seal ideal for corrosive media***
- ***Proven high-performance design***
- ***Corrugated and spiral wound variants cover broad range of applications***



As a premier supplier to the chemical and hydrocarbon processing industries, James Walker has seen an increasing demand for 'fire safe' products across a broad range of applications.

Our basic design philosophy aims to exceed customer expectations, industry and safety standards by a comfortable margin. In this case, to meet industry demand, we have taken two of our proven, multi-purpose gaskets and undertaken further development work to create fire-safe certified products with the same levels of sealing efficiency.

The result – peace of mind for our customers who now have two fully certified fire-safe gaskets that can be specified with confidence across a broad range of high pressure applications in corrosive environments.

Metaflex® SG/IR Fire-Safe and Corrusafe FS are designed for use in areas where it is essential to prevent leakage of flammable, toxic or corrosive products under emergency fire conditions. Both products combine the benefits of a PTFE chemically inert inner seal to eliminate the risk of process contamination, resistant to operational temperatures of up to 260° C, with an outer sealing element of graphite that provides a secondary seal under fire conditions.

## Fire Test certification to API 607 – ISO 10497

ANSI/API Standard 607, Fifth edition, June 2005

ISO 10497-5:2004 (identical), testing of valves – fire type-testing requirements

The third party tests were carried out by CEWAC / EID and witnessed by LLOYDS in July 2008.

Each test comprises three parts; an initial hydro pressure test to establish seal tightness. This is followed by exposure to fire for a minimum of 30 minutes at an average temperature of at least 650° C and average pressure of 20 bar. After a cooling down period the assembly is again tested for leakage.

Both our Metaflex® SG/IR Fire-Safe and Corrusafe FS products completed the test successfully, recording zero leakage under all conditions.

Test	Metaflex® SG/IR Fire-Safe	Corrusafe FS
<b>Preliminary hydro test</b>		
Minimum test time	10 minutes	10 minutes
Average pressure	27.5 bar / 400psi	27.5 bar / 400psi
Assembly and rig watertightness	No leakage	No leakage
<b>Fire Type-testing</b>		
Minimum test time	30 minutes	30 minutes
Average pressure	20.6 bar / 300psi	19.9 bar / 290psi
Minimum cooling time	8 minutes	7.5 minutes
Combined external leakage	No leakage	No leakage
Permissible combined external leakage	17.0 ml	17.0 ml
<b>Post burn leakage test</b>		
Minimum test time	5 minutes	5 minutes
Average pressure	19.9 bar / 290psi	20.1 bar / 292psi
Upstream flange external leakage	No leakage	No leakage
Downstream flange external leakage	No leakage	No leakage
Permissible external leakage	500 ml	500 ml

## Metaflex® SG/IR Fire-Safe

James Walker Metaflex® spiral wound gaskets are designed to seal flanges where temperature, pressure, vibration or flow rates are beyond the capability of conventional jointing materials. They are wound in a special V-shaped section metal strip and a softer filler material so that flange surfaces are presented with a spiral of alternate metal/filler layers.

The PTFE inner sealing element of these gaskets makes them ideally suited for use in highly corrosive or extreme purity applications.

Typical applications include pipelines and pressure vessels on steam, petrochemical, nuclear, marine and hydraulic plant; and heat-exchangers.



**Composition:** 316L stainless steel inner support ring, winding strip with PTFE inner seal, graphite outer seal and carbon steel outer ring material on standard design. Other specialist materials are also available including Hastelloy, Monel, Inconel etc.

**Temperature:** Continuous Max: +260°C (+500°F)

**Pressure:** Maximum: 350 bar (5,000psi)

**Sizes:** DN 10 to DN 1200 : pressure ratings PN10 to PN40  
1/2" to 48" pressure ratings 150 to 600

**Meets Specification:** Products are manufactured in accordance with all relevant gasket standards to suit flange designations: ASME B16.5, BS1560, ASME B16.47 Series A (MSS-SP44), ASME B16.47 Series B (API605), BS EN 1092 (BS4504); plus DIN, JIS and NF.

Metaflex® gaskets with graphite or PTFE fillers are certified as meeting TA-Luft emission control requirements.

**Fire Safe Certification:** API 607 – ISO 10497

## Corrusafe FS

James Walker Corrusafe FS gaskets are corrugated stainless steel support rings with dual material sealing facings to the inner and outer boundaries. These gaskets are designed to seal flanges where temperature, pressure, vibration or flow rates are beyond the capability of conventional jointing materials.

The PTFE inner sealing element of these gaskets makes them ideally suited for use in highly corrosive or extreme purity applications.

Typical applications include pipelines and pressure vessels on steam, petrochemical, nuclear, marine and hydraulic plant; and heat-exchangers.



**Composition:** 316L stainless steel corrugated ring with PTFE inner envelope and graphite outer seal material.

**Temperature:** Continuous Max: +260°C (+500°F)

**Pressure:** Maximum: 50 bar (710psi)

**Sizes:** DN 10 to DN 1200 : pressure ratings PN10 to PN40  
1/2" to 48" pressure ratings 150 to 600

**Meets Specification:** Products are manufactured in accordance with all relevant gasket standards to suit flange designations: ASME B16.5, BS1560, ASME B16.47 Series A (MSS-SP44), ASME B16.47 Series B (API605), BS EN 1092 (BS4504); plus DIN, JIS and NF.

**Fire Safe Certification:** API 607 – ISO 10497

**Health warning:** If PTFE or fluoroelastomer (eg, FKM, FFKM, FEPM) products are heated to elevated temperatures, fumes will be produced which may give unpleasant effects, if inhaled. Whilst some fumes are emitted below 250°C from fluoroelastomers or 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 fluoroelastomer, or with PTFE dispersion, which may remain on hands or clothing. Material Safety Data Sheets (MSDS) are available on request.

Information in this publication and otherwise supplied to users is based on our general experience and is given in good faith, but because of factors which are outside our knowledge and control and affect the use of products, no warranty is given or is to be implied with respect to such information. Specifications are subject to change without notice.

Statements of operating limits quoted in this publication are not an indication that these values can be applied simultaneously. Material Safety Data Sheets (MSDS) are available on request.

## James Walker companies worldwide

### James Walker & Co

Tel: +44 (0)1270 536000  
Fax: +44 (0)1270 536100  
Email: [csc@jameswalker.biz](mailto:csc@jameswalker.biz)

### James Walker Australia

Tel: +61 (0)2 9644 9755  
Fax: +61 (0)2 9645 2009  
Email: [sales.au@jameswalker.biz](mailto:sales.au@jameswalker.biz)

### James Walker Benelux

(Belgium)  
Tel: +32 3 820 7900  
Fax: +32 3 828 5484  
Email: [sales.be@jameswalker.biz](mailto:sales.be@jameswalker.biz)  
(Netherlands)  
Tel: +31 (0)186 633111  
Fax: +31 (0)186 633110  
Email: [sales.nl@jameswalker.biz](mailto:sales.nl@jameswalker.biz)

### James Walker China

Tel: +86 21 6876 9351  
Fax: +86 21 6876 9352  
Email: [sales.cn@jameswalker.biz](mailto:sales.cn@jameswalker.biz)

### James Walker Deutschland

Tel: +49 (0)40 386 0810  
Fax: +49 (0)40 389 3230  
Email: [sales.de@jameswalker.biz](mailto:sales.de@jameswalker.biz)

### James Walker France

Tel: +33 (0)437 497 480  
Fax: +33 (0)437 497 483  
Email: [sales.fr@jameswalker.biz](mailto:sales.fr@jameswalker.biz)

### James Walker Iberica

Tel: +34 94 447 0099  
Fax: +34 94 447 1077  
Email: [sales.es@jameswalker.biz](mailto:sales.es@jameswalker.biz)

### James Walker Ireland

Tel: +353 (0)21 432 3626  
Fax: +353 (0)21 432 3623  
Email: [sales.ie@jameswalker.biz](mailto:sales.ie@jameswalker.biz)

### James Walker Italiana

Tel: +39 02 257 8308  
Fax: +39 02 263 00487  
Email: [sales.it@jameswalker.biz](mailto:sales.it@jameswalker.biz)

### James Walker Mfg (USA)

Tel: +1 708 754 4020  
Fax: +1 708 754 4058  
Email: [sales.jwmfg.us@jameswalker.biz](mailto:sales.jwmfg.us@jameswalker.biz)

### James Walker New Zealand

Tel: +64 (0)9 272 1599  
Fax: +64 (0)9 272 3061  
Email: [sales.nz@jameswalker.biz](mailto:sales.nz@jameswalker.biz)

### James Walker Norge

Tel: +47 22 706 800  
Fax: +47 22 706 801  
Email: [sales.no@jameswalker.biz](mailto:sales.no@jameswalker.biz)

### James Walker Oil & Gas (USA)

Tel: +1 281 875 0002  
Fax: +1 281 875 0188  
Email: [oilandgas@jameswalker.biz](mailto:oilandgas@jameswalker.biz)

### James Walker Singapore

Tel: +65 6777 9896  
Fax: +65 6777 6102  
Email: [sales.sg@jameswalker.biz](mailto:sales.sg@jameswalker.biz)

### James Walker South Africa

Tel: +27 (0)31 205 6251/2/3  
Fax: +27 (0)31 205 6266  
Email: [sales.za@jameswalker.biz](mailto:sales.za@jameswalker.biz)

---

## James Walker Moorflex Ltd

John Escritt Road  
Bingley  
West Yorkshire  
BD16 2BS  
United Kingdom  
Tel: + 44 (0)1274 562 211  
Fax: + 44 (0)1274 566 623  
Email: [sales.moorflex.uk@jameswalker.biz](mailto:sales.moorflex.uk@jameswalker.biz)

[www.jameswalker.biz/moorflex](http://www.jameswalker.biz/moorflex)



CERTIFICATE No. Q05429  
BS EN ISO 9001:2000