

## HOW THORBURN KLF12 WORKS

**Building Better Fabric Expansion Joints 1000°F (538°C) MCOT as per ASTM C-411 hot surface performance test**

### LAMINATED FIBREGLASS INSULATION TO PTFE COATED FABRIC BELT

#### Product Description:

Thorburn's **KLF12** gas seal membrane has a Maximum Continuous Operating Temperature (MCOT) of 1000°F (538°C). The KLF12 is a composite flexible membrane consisting of...

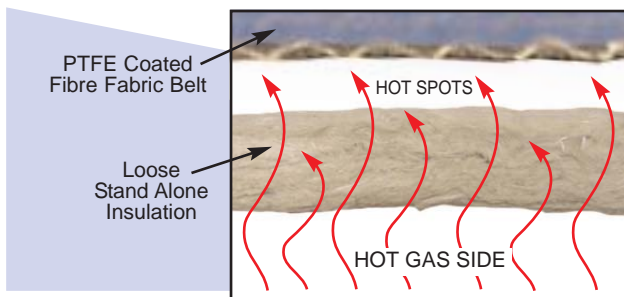
- 1) Load bearing PTFE coated fibreglass fabric.
- 2) A gas side corrosion barrier made from non-porous multi-directional laminated PTFE film.
- 3) A thermal barrier made of 1/2" (13mm) laminated, non-woven fibreglass insulation.

#### KLF12 Advantage:

The multi-directional corrosion liner is a 100% PTFE material that is capable of resisting the stress cracking caused by flexing (as per ASTM D-2176 flexing test) and severe temperature fluctuation.

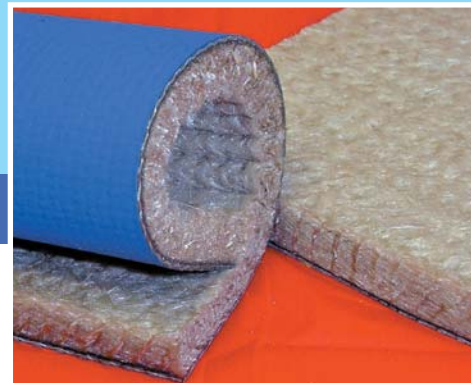
Permanently anchoring the low strength insulation materials to the coated fabric expansion joint belt, the insulation materials also "acquire" some of the high strength traits of the PTFE fabric components. This enables the insulation materials to hold up longer to the severe stresses they encounter in flue duct seal applications, thereby extending the service lives of the composite expansion joints in which they are being used to insulate.

#### LOOSE STAND ALONE INSULATION PROBLEMS

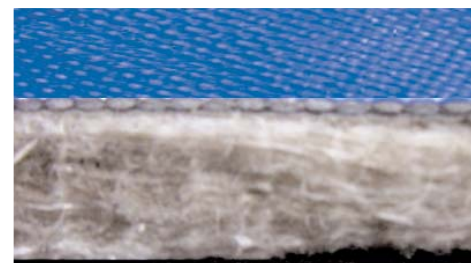


#### Inferior Designs Allow For Hot Spots:

Hot flue gas is able to penetrate insulation materials when they are used as "stand alone" components in composite expansion joints.

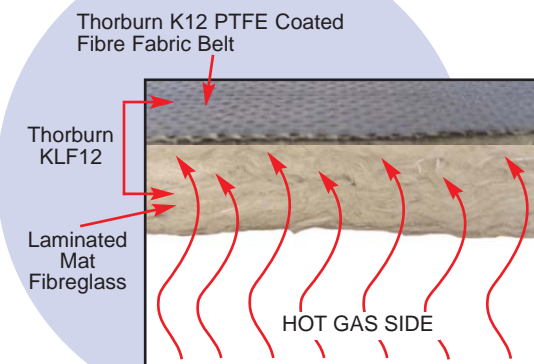


Thorburn's KLF12 PTFE Coated Fibre Fabric Belt with laminated 13mm fibreglass thermal barrier



Cross-section view of KLF12 with 1/2 inch laminated thermal barrier.

#### KLF12 WORKING OVER-TIME FOR YOU



### Thorburn's KLF12 Design Specifications:

\*Tensile strength of 1" (25.4 mm) width sample

Overall Weight:	121 oz/yd <sup>2</sup> (4103 g/m <sup>2</sup> )	PTFE Resin Content Barrier:	9.6 oz/yd <sup>2</sup> (325 g/m <sup>2</sup> )
Overall Thickness:	0.54" (13.7 mm)	Thickness of Laminated Insulation:	0.5" (13 mm)
Chemical Barrier Description:	Multi-Directional PTFE	Tensile Strength-Warp : As per ASTM D-1117	1200 lbs/in (5338 N/25.4 mm)
Chemical Barrier Thickness:	0.006" (0.15 mm)	Tensile Strength-Fill: As per ASTM D-751	1200 lbs/in (5338 N/25.4 mm)
Coating Description:	PTFE	Temperature Rating (MCOT):	1000°F (538°C)
PTFE Resin Content Coating:	18 oz/yd <sup>2</sup> (610 g/m <sup>2</sup> )	Intermittent Temperature:	1100°F (593°C)