



KLFCW Flexible Membrane with optional vapor barrier and wire mesh

KLFC FLEXIBLE MEMBRANE

**Building Better Fabric Expansion Joints 2000°F (1094°C)
MCOT as per ASTM C-411 hot surface performance test**

Product Description:

Thorburn's KLFC composite flexible membrane is designed to withstand a maximum continuous operating temperature (MCOT) of 2000°F (1094°C), without additional cavity insulation. inferior designs make the belt dependent upon the cavity insulation for their survival at high temperatures. please see the attached photo testing KLFC at 2000°F according to ASTM C-411.

Construction:

- 1) A load bearing PTFE coated fibreglass fabric.
- 2) A gas side corrosion barrier made from non-porous multi-directional laminated PTFE film. (optional skinside)
- 3) Inner thermal barrier made of 1/2" (13mm) laminated, non-woven fibreglass insulation.
- 4) Additional thermal barrier made from ceramic fibre blanket attached on the gas side and supported by an outside layer of silica fibre.

KLFC Advantage:

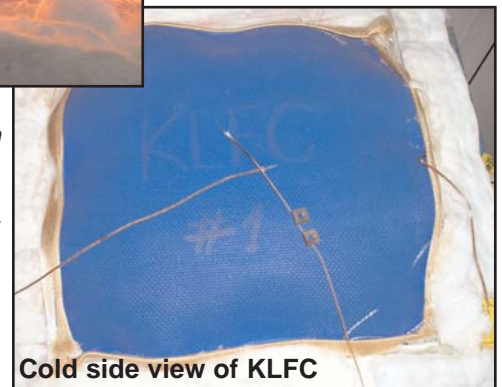
The multi-directional corrosion liner is a 100% PTFE material that is capable of resisting the stress cracking caused by flexing as per ASTM D-2176 flexing test and severe temperature fluctuation. The thermal barrier is achieved through a laminated 1/2" thick fiberglass and ceramic fibre insulation blanket (thickness and density to meet stand alone temperature requirements). Optional vapor barriers are used to prevent due point condensation from attacking the insulation barriers.. The thermal barriers is enveloped with a silica cloth, optional stainless steel or inconel wire mesh may be added to increase the tensile strength.



Hot side view of KLFC

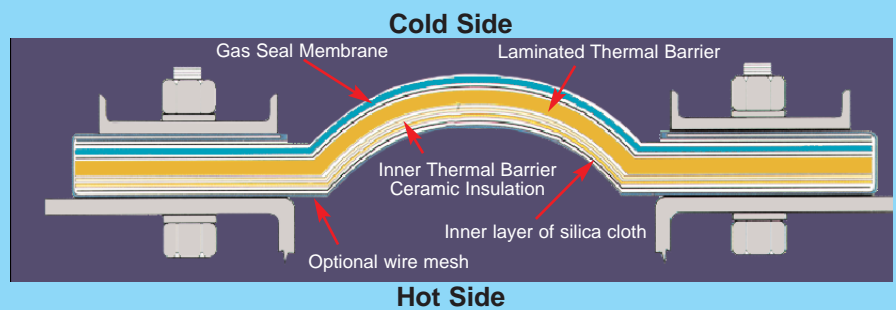
3rd party lab performed temperature tests on Thorburn's KLFC with a minimum stand alone thermal barrier 1.5" (38mm) consisting of a 13mm laminated fiberglass and 25mm high density ceramic insulation. The hot side temperature of 2000°F the cold side temperature was 364°F (184°C). The 2nd test with a hot side temperature of 1200°F (648°C) the cold side temperature was 211°F (99°C). Test results available upon request

Hot surface performance test for 96 hours @ 2000°F (1094°C) As per ASTM C-411



Cold side view of KLFC

TYPICAL KLFC COMPOSITE BUILD-UP



Thorburn's KLFC Minimum Design Specifications: *Tensile strength of 1" (25.4 mm) width sample

Overall Weight :	264 oz/yd ² (8935 gm/m ²)	PTFE Resin Content Barrier:	9.6 oz/yd ² (325 g/m ²)
Minimum Overall Thickness:	1.5" (38 mm)	Thickness of Laminated Insulation:	0.5" (13 mm)
Chemical Barrier Description:	Multi-Directional PTFE	Tensile Strength-Warp :	1200 lbs/in (5338N/25.4 mm)
Chemical Barrier Thickness:	0.006" (0.15 mm)	As per ASTM D-751	
Coating Description:	PTFE	Tensile Strength-Fill:	1200 lbs/in (5338N/25.4 mm)
PTFE Resin Content Coating:	18 oz/yd ² (610 g/m ²)	As per ASTM D-751	
		Temperature Rating (MCOT):	2000°F (1094°C)
		Minimum Ceramic Insulation:	1" (25 mm)
		Density	6lbs/cu.ft

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