

GRAFKOTE® Non-Metal Reinforced Laminate

Technical Data Sheet 144

Product Family - Laminates (Non-Metal Reinforced)

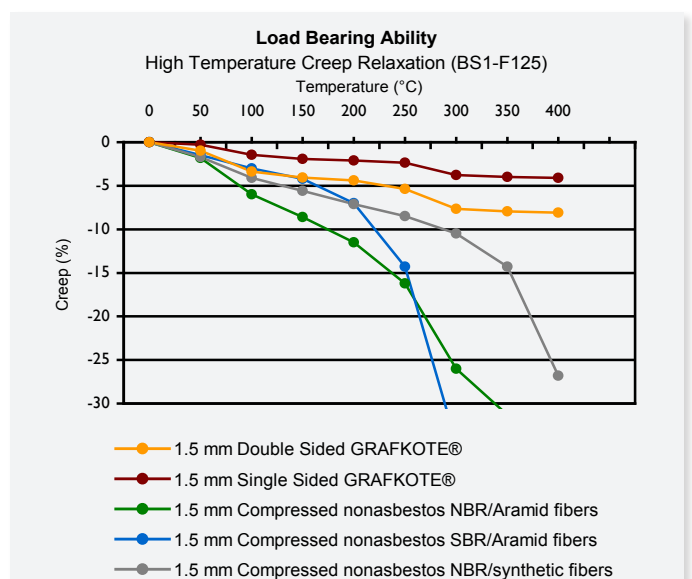
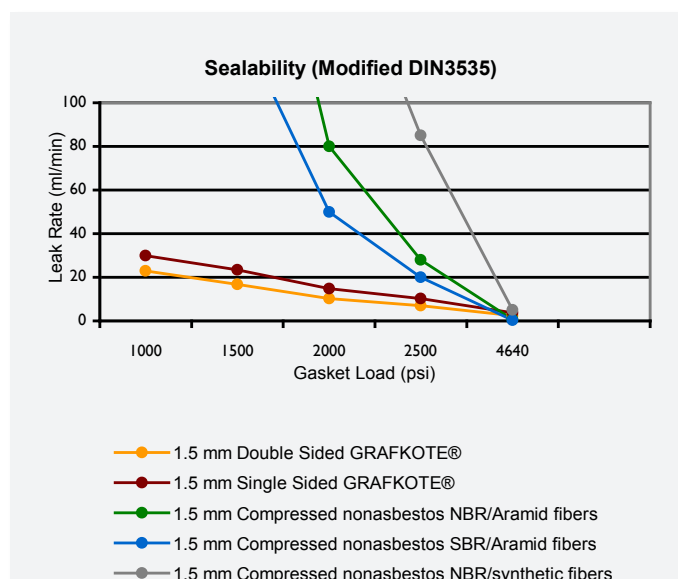
- GHP - GTB with Plastic Insert
- GHN - TG-337 with Plastic Insert
- GHW - GTB with Woven Glass Fiber Insert
- GRAFKOTE® - GTB with Plastic Facing

Product Overview

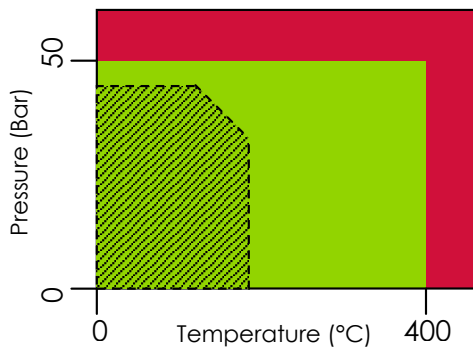
GRAFOIL® GRAFKOTE® non-metal reinforced laminate consists of GRAFOIL® GTB flexible graphite with a polymer facing thermally bonded on one (“Single-Sided”) or both (“Double-Sided”) faces. The polymer facing enhances product handleability and durability.

Applications




- Valves
- Pumps
- Pipe Flanges/ASME/ API/DIN flanges
- Glass-lined or low load flange equipment
- Steam traps
- Heat exchangers
- Compressors



PT Guidelines



GRAFKOTE® material PxT: 8,662,500

	Recommended for non-asbestos fiber sheet
	Recommended for GRAFKOTE products
	Not recommended for GRAFKOTE products

The pT Guidelines chart offers general recommendations for gasketing materials, based on pressure and operating temperature. This information is offered only as a guideline and should not be viewed independently from application environment, chemical compatibility and gasket thickness.

Advantages of GRAFKOTE® Non-Metal Reinforced Laminate

- Compatible with a wide range of chemicals
- Maximum continuous use temperature 400°C (750°F)
- No shelf life
- Material availability in rolls allows for maximum material utilization
- Easily cut
- Improved handleability, durability
- Superior to non-asbestos fiber sheet in every characteristic (Creep, Recovery and Sealability)

Typical Properties*

Characteristic	Typical Value
Thickness of Laminate	0.030" (0.76 mm) for Single-Sided 0.060" (1.52 mm) for Single-Sided 0.062" (1.57 mm) for Double-Sided
Width	39.4" (1000 mm)
Length	39.4" (1000 mm) 100' (30.5 m)
Bulk Density (Graphite)	70 lb/ft ³ (1.12 g/cc)
Application Temperature	400°C (750°F) Maximum for > 0.030" 200°C (750°F) Maximum for ≤ 0.020"
Compressibility at 5000 psi (35 MPa) load	43%
Recovery after 5000 psi (35 MPa) load	20%
Creep Relaxation Method: BSI-F125 at 6391 psi (44.1 MPa) load up to 400°C	<4% for 70 lb/ft ³
Tensile Strength	800 psi (5.5 MPa) for ≥ 0.030" Thick 950 psi (6.6 MPa) for 0.010" Thick
Pressure classes	ASME 150, ASME 300, PN20, PN50
Certification	Certify to Grade

Notes:

* Properties listed are typical and cannot be used as accept/reject specifications.

Single-Sided Laminate Construction

- 1) 0.0005" thick polymer
- 2) GRAFOIL® GTB flexible graphite (per Technical Bulletin 436)

Double-Sided Laminate Construction

- 1) 0.0005" thick polymer
- 2) GRAFOIL® GTB flexible graphite (per Technical Bulletin 436)
- 3) 0.0005" thick polymer

Fluid Soaking Properties

ASTM IRM 903 Oil (5 hrs at 150°C)	50/50 Water Glycol (22 hrs boiling)	Fuel B (5 hrs at room temp)
Thickness Change: 2%	Thickness Change: 3%	Thickness Change: 5%
Weight Change: 30%	Weight Change: 50%	Weight Change: 33%

ASTM IRM Oil 1 (5 hrs at 150°C)	Distilled Water (5 hrs at 100°C)
Thickness Change: 3%	Thickness Change: 1.5%
Weight Change: 38%	Weight Change: 40%

ASME Gasket Factors

- "m" Factor: 2
- "y" Stress: 900 psi (6.22 MPa)
- Max Gasket Unit Load: 6,526 psi (45 MPa)

+1 (800) 253-8003 (Toll-Free in USA)

+1 (216) 529-3777 (International)

www.graftechAET.com | info@graftechAET.com

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