

# NON-METAL REINFORCED LAMINATES

## STANDARD GRADES



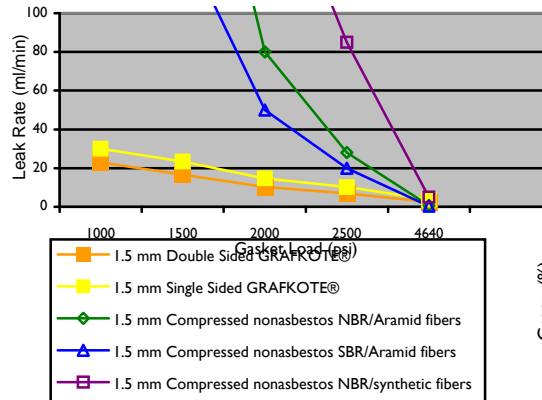
## GRAFOIL Grade GRAFKOTE®

GRAFOIL GRAFKOTE laminates are made with GRAFOIL Grade GTB\* flexible graphite thermally bonded to a 0.0005" thick polymer facing on one ("Single-Sided") or both ("Double-Sided") sides. The polymer facing enhances product handleability and durability, making GRAFKOTE laminates an excellent gasketing material. Each laminate is surface identifiable, branded with the GRAFOIL grade.

### ADVANTAGES OF GRAFKOTE PRODUCTS

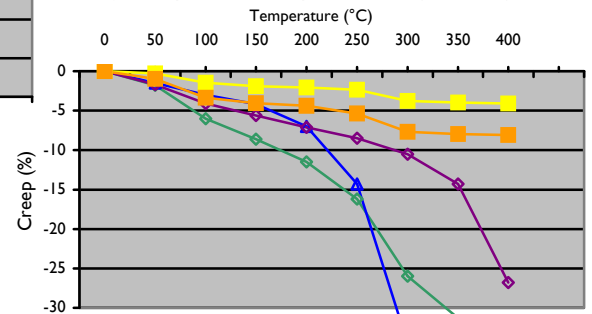
- Compatible with many chemicals
- Maximum continuous use temperature 400°C (750°F)
- No shelf life
- Material availability in rolls allows for maximum material utilization
- Easily cut
- Contains no hazardous materials
- Improved handleability, durability
- Superior to non-asbestos fiber sheet in every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

### Sealability (Modified DIN3535)



### Load Bearing Ability

#### High Temperature Creep Relaxation (BSI-F125)

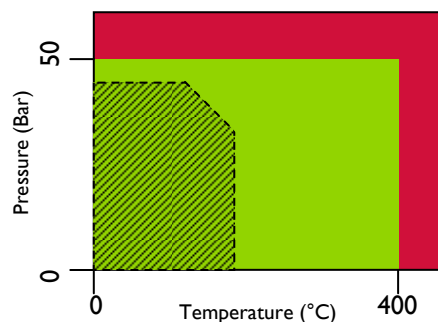


## APPLICATIONS

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



### pT Guidelines



GRAFKOTE material P<sub>xT</sub>: 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.

## GRAFKOTE® Typical Properties<sup>1</sup>

### Single-Sided Laminate Construction:

1. 0.0005" thick polymer
2. GRAFOIL Grade GTB (per Technical Bulletin 436)

### Double-Sided Laminate Construction:

1. 0.0005" thick polymer
2. GRAFOIL Grade GTB\* (per Technical Bulletin 436)
3. 0.0005" thick polymer

CHARACTERISTIC	TYPICAL PROPERTY
Thickness of Laminate	0.030" (0.76 mm) Standard for Single-Sided 0.060" (1.52 mm) Standard for Single-Sided 0.062" (1.57 mm) Standard for Double-Sided <i>Non-standard thicknesses may be available upon request</i>
Width	39.4" (1000 mm) Standard <i>Non-standard widths may be available upon request.</i>
Length	39.4" (1000 mm) Standard 100' (30.5 m) Standard (Not available for 0.082" thick) <i>Non-standard lengths may be available upon request</i>
Bulk Density (Graphite)	70 lb/ft <sup>3</sup> (1.12 g/cc) Standard <i>Non-standard densities may be available upon request</i>
Application Temperature	400°C (750°F) Maximum for 0.030", 0.060", 0.062", 0.082" thick 200°C (750°F) Maximum for 0.010", 0.017" thick
Compressibility at 5000 psi (35 MPa) load	43% Typical
Recovery after 5000 psi (35 MPa) load	20% Typical
Creep Relaxation Method: BSI-F125 at 6391 psi (44.1 MPa) load up to 400°C	<4% Typical for 70 lb/ft <sup>3</sup>
Tensile Strength	800 psi (5.5 MPa) Typical for >= 0.030" Thick 950 psi (6.6 MPa) Typical for 0.010" Thick
Pressure classes	ASME 150, ASME 300, PN20, PN50
Certification	Certify to Grade

### Fluid Soaking Properties

ASTM IRM 903 Oil (5 hrs at 150°C)
Thickness Change : 2%
Weight Change: 30%

50/50 Water Glycol (22 hrs boiling)
Thickness Change : 3%
Weight Change: 50%

Fuel B(5 hrs at room temp)
Thickness Change : 5%
Weight Change: 33%

ASTM IRM Oil I(5 hrs at 150°C)
Thickness Change : 3%
Weight Change: 38%

Distilled Water (5 hrs at 100°C)
Thickness Change : 1.5%
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)

<sup>1</sup> Properties listed are typical and cannot be used as accept/reject specifications. Specifications are listed under Technical Bulletin 203.