

# GHR Metal-Reinforced Laminate

Technical Data Sheet 130

## Product Family - Laminates (Metal-Reinforced)

- GHH - GTC with Flat Low-Carbon Steel
- TG-251 - GTC with Thicker Low-Carbon Steel
- GHE - GTB with Tanged Stainless Steel
- GHR - GTB with Flat Stainless Steel
- GHT - GTB with C-276

## Product Overview

GRAFOIL® GHR metal-reinforced laminate consists of GRAFOIL® GTB flexible graphite adhesively bonded to both faces of a flat stainless steel core.

## Applications

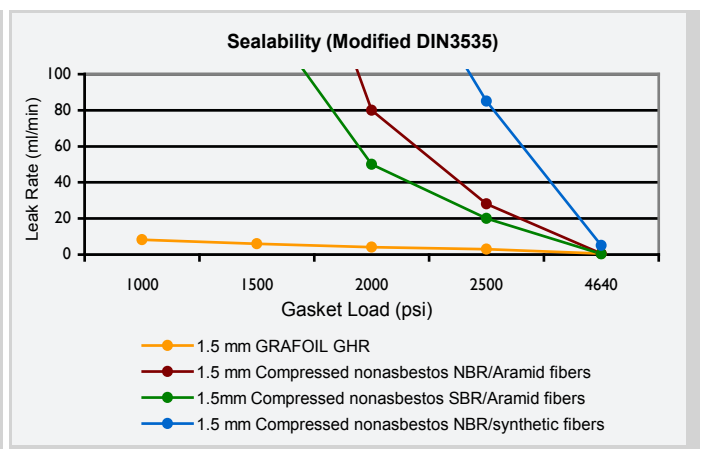
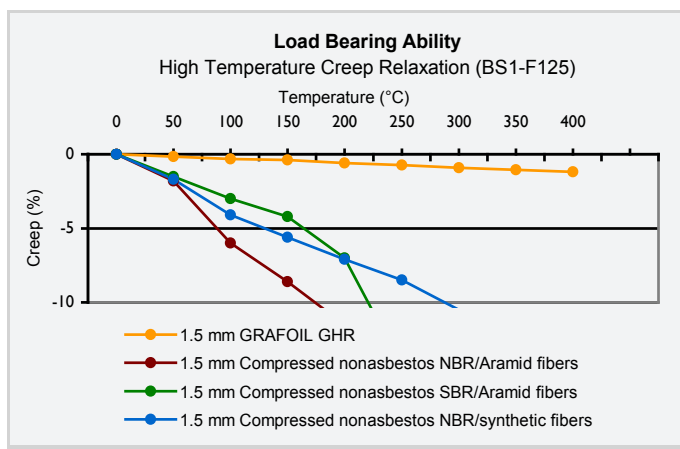
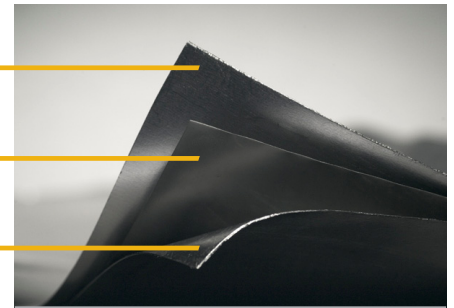
GRAFOIL® GHR material is suitable for standard industrial fluid sealing applications.

- Chemical
- Petrochemical
- Refinery
- Steam Service
- Cryogenic Applications
- ASME Class 150 & 300 Flanges

GRAFOIL® GTB Flexible Graphite  
(per Technical Data Sheet 436)

0.002" thick flat 316 or 316L stainless steel insert  
(per ASTM F-A-240 and AMS 5524)

GRAFOIL® GTB Flexible Graphite  
(per Technical Data Sheet 436)



While maintaining an effective seal, GRAFOIL® material exhibits virtually no creep relaxation. As a result, the need for periodic bolt tightening is greatly reduced.

## Typical Properties\*

Characteristic	Typical Value
Thickness of Laminate	0.032" (0.81 mm) 0.062" (1.57 mm) 0.122" (3.10 mm)
Width	39.4" (1000 mm)
Length	39.4" (1000 mm) 60" (1524 mm) for $\geq 0.082$ " thickness 100' (30.5 m) for $< 0.062$ " thickness
Bulk Density (Graphite)	70 lb/ft <sup>3</sup> (1.12 g/cc)
Compressibility at 5000 psi (35 MPa) load	40%
Recovery after 5000 psi (35 MPa) load	15%
Creep Relaxation Method: BSI-F125 at 6391 psi (44.1 MPa) load up to 400°C	<3% for 70 lb/ft <sup>3</sup>
Sealability Method: Mod DIN 3535 at 580 psi N <sup>2</sup> at 32 MPa load	<1.5 ml/min for 70 lb/ft <sup>3</sup>
Tensile Strength	3800 psi (26.31 MPa) additive of steel and GRAFOIL® flexible graphite
Temperature Use Range	-400°F to 975°F (-240°C to 525°C)
Resistance in #3 Oil Thickness increase Weight change	<12% <35%
Resistance in #1 Oil Thickness increase Weight change	<8% <33%
Certification	Certify to Grade

Notes:

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

### ASME Gasket Factors

- "m" Factor: 2
- "y" Stress: 900 psi (6.22 MPa)
- Max Gasket Unit Load: 24,000 psi (165.87 MPa)



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