

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

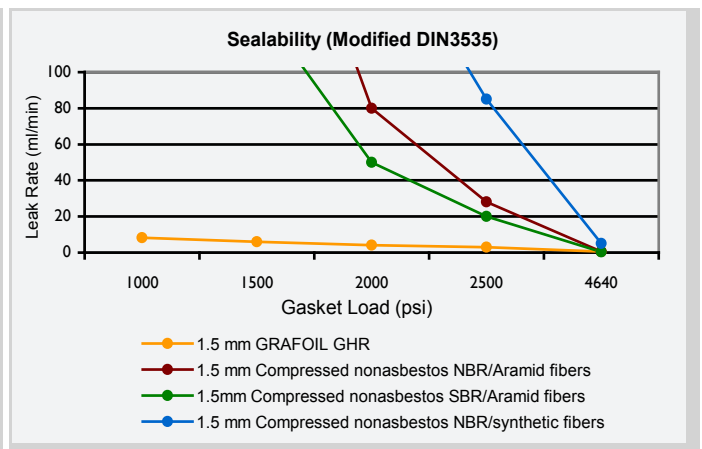
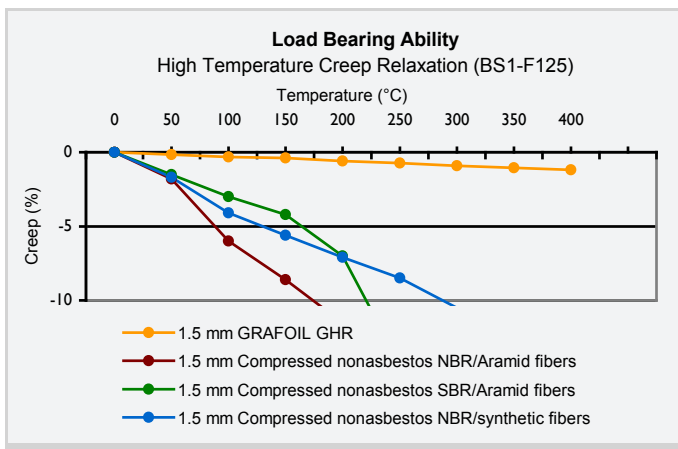
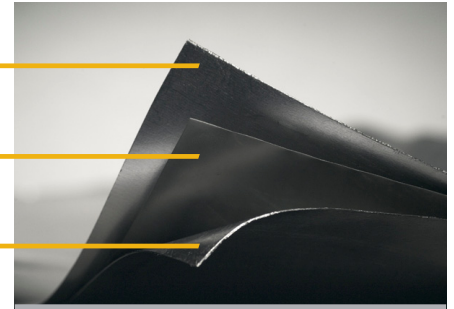
GRAFOIL® GHR material is suitable for standard industrial fluid sealing applications.

- 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 ≥ 0.082 " thickness 100' (30.5 m) for < 0.062 " thickness |
| Bulk Density (Graphite) | 70 lb/ft ³ (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 ³ |
| Sealability Method: Mod DIN 3535 at 580 psi N ² at 32 MPa load | <1.5 ml/min for 70 lb/ft ³ |
| 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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