

TG-251 Metal-Reinforced Laminate

Technical Data Sheet 018

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® TG-251 metal-reinforced laminate consists of GRAFOIL® GTC flexible graphite chemically bonded to both faces of a flat, 0.0066" low-carbon steel core. TG-251 laminates offer improved handling over GRAFOIL® GHH laminates for larger gasket sizes.

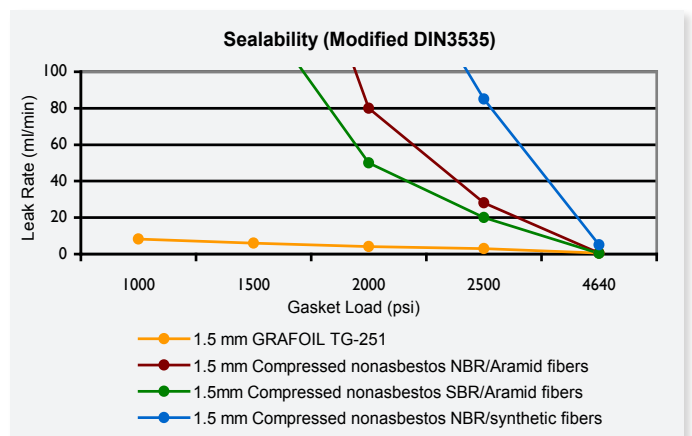
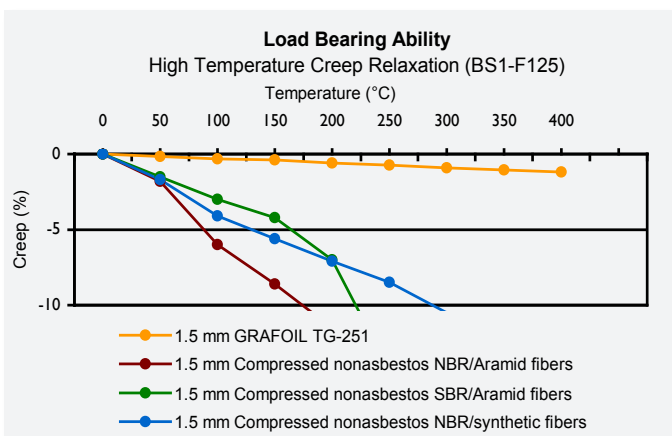
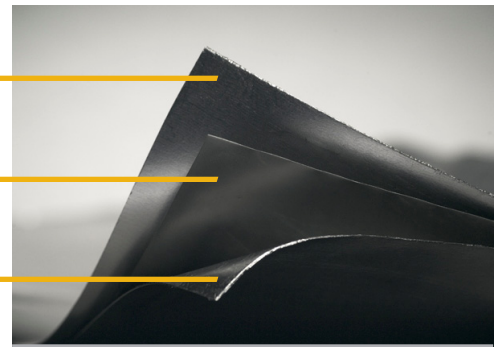
Applications

- Exhaust sealing
- Gasoline/diesel head gaskets
- EGR valve sealing
- Turbo charger gaskets

GRAFOIL® GTC Flexible Graphite
(per Technical Data Sheet 002)

Low-Carbon Steel

GRAFOIL® GTC Flexible Graphite
(per Technical Data Sheet 002)



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

Laminate Construction

- 1) GRAFOIL® GTC flexible graphite (per Technical Data Sheet 002)
micro-thin, phenolic-based adhesive
- 2) 0.0066" thick Low-Carbon Steel Grade 1008 or 1010
micro-thin, phenolic-based adhesive
- 3) GRAFOIL® GTC flexible graphite (per Technical Data Sheet 002)

Typical Properties*

Characteristic	Typical Value
Thickness of Laminate	0.037" (0.94 mm) 0.047" (1.19 mm)
Width	24" (610 mm)
Length	24" (610 mm) 100' (30.5 m)
Bulk Density (Graphite)	70 lb/ft ³ (1.12 g/cc)
Compressibility at 5000 psi (35 MPa) load	34%
Recovery after 5000 psi (35 MPa) load	31%
Creep Relaxation Method: BSI-F125 at 6391 psi (44.1 MPa) load up to 400°C	<3% for 70 lb/ft ³
Air Aging, 5 hours at 540°C	
Weight Loss	5%
Compressibility	39%
Recovery	24%
Fluid Soaking Distilled Water, 22 hrs @ boiling 50/50 Glycol/Water, 48 hrs @ boiling	No separation between GRAFOIL® material and steel No separation between GRAFOIL® material and steel

Notes:

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

+1 (800) 253-8003 (Toll-Free in USA)
+1 (216) 529-3777 (International)

www.graftech.com | www.grafoil.com
grafoil@graftech.com

Redefining limits

© 2013 GrafTech International Holdings Inc. This information is based on data believed to be reliable but GrafTech makes no warranties, express or implied, as to its accuracy and assumes no liability arising out of its use. The data listed falls within the normal range of product properties but should not be used to establish specification limits or used alone as the basis of design. GrafTech's liability to purchasers is expressly limited to the terms and conditions of sale. GRAFOIL, EXPANDOGRAF, GRAFKOTE, GTS, and RIBBON-PACK are registered trademarks of GrafTech International Holdings Inc. GRAFOIL flexible graphite materials, and processes are covered by several US patents. For patent information visit www.grafoil.com/patents.

2.21.2013