

# GHL-J & GHL Flexible Graphite Laminate

Technical Data Sheet 438

#### **Product Family -** Laminates (Multi-Layer Graphite)

- GHL-A, GHC Adhesively Bonded (GTA, GTC)
- GHA, GHA-C Cured for Low Outgassing (GTA, GTC)
- GHL-J, GHL Adhesively Bonded, Inhibited (GTJ, GTB)
- GHA-J, GHB Cured for Low Outgassing (GTJ, GTB)

#### **Product Overview**

GRAFOIL® GHL-J flexible graphite laminate consists of multiple layers of GRAFOIL® GTJ flexible graphite. GRAFOIL® GHL flexible graphite laminate consists of multiple layers of GRAFOIL® GTB flexible graphite.



#### **Applications**

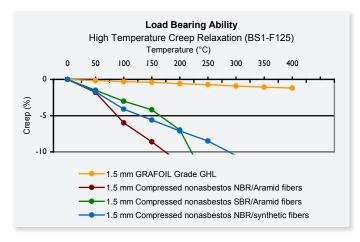
- Chemical
- Petrochemical
- Refinery
- Steam Service
- ASME class 150 & 300 Flanges

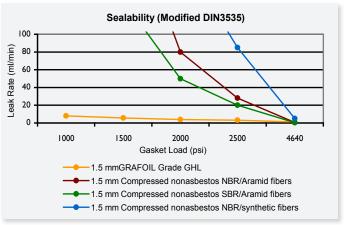
#### **GHL-J Laminate Construction**

- 1) GRAFOIL® GTJ flexible graphite (per Technical Data Sheet 437)
- 2) Micro-thin, phenolic-based adhesive
- 3) GRAFOIL® GTJ flexible graphite (per Technical Data Sheet 437)

#### **GHL Laminate Construction**

- 1) GRAFOIL® GTB flexible graphite (per Technical Data Sheet 436)
- 2) Micro-thin, phenolic-based adhesive
- 3) 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   | GHL-J<br>Typical Value   | GHL<br>Typical Value   |
|--|--|--|
| Thickness of Laminate  | 0.060" (1.52 mm)<br>0.120" (3.05 mm)   | 0.060" (1.52 mm)<br>0.120" (3.05 mm)   |
| Width  | 24" (610 mm)<br>39.4" (1000 mm) for 0.060" & 0.120" thick                                  | 24" (610 mm)<br>39.4" (1000 mm) for 0.060" & 0.120" thick                                  |
| Length   | 24" (610 mm)<br>39.4" (1000 mm) for 0.060" & 0.120" thick<br>100' (30.5 m) fo 0.060" thick | 24" (610 mm)<br>39.4" (1000 mm) for 0.060" & 0.120" thick<br>100' (30.5 m) fo 0.060" thick |
| Bulk Density (Graphite)  | 70 lb/ft³ (1.12 g/cc)  | 70 lb/ft³ (1.12 g/cc)  |
| Compressibility<br>at 5000 psi (35 MPa) load                                 | 43%  | 43%  |
| Recovery<br>after 5000 psi (35 MPa) load                                     | 11%  | 11%  |
| Creep Relaxation<br>Method: BSI-F125 at 6000 psi<br>(40 MPa) loadup to 400°C | < 3% for 70 lb/ft <sup>3</sup>   | < 3% for 70 lb/ft <sup>3</sup>   |
| Sealability<br>Method: Mod DIN 3535 at 580<br>psi N2 at 32 MPa load          | < 1.5 ml/min for 70 lb/ft <sup>3</sup>   | < 1.5 ml/min for 70 lb/ft <sup>3</sup>   |
| Temperature Use Range  | -400°F to 975°F (-240°C to 525°C)  | -400°F to 975°F (-240°C to 525°C)  |

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## **Redefining limits**

www.graftech.com | www.grafoil.com

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