GRAFOIL[®] Single Layer Inhibited Flexible Graphite

- GRAFOIL[®] Single Layer Inhibited flexible graphite materials are pure graphite compressed at high pressure to form the various thicknesses. *Nuclear* grade is also available.
- Inhibited against oxidation and corrosion for use in most industrial fluid sealing applications.
- Continuous operating temperature ranges from 240°C to 525°C, also function up to 3000°C in vacuum or reducing environments.
- Chemical resistant to aggressive chemical.
- The most efficient sealing gaskets and packing
- Good and healthy replacement for asbestos
- Unlimited shelf Life



Asia authorized distributor: Everjoy Industrial Supplies Pte. Ltd. Telephone: +65 6748 3093 Fax: +65 6748 7202 Email: salesmgnt@everjoy.com.sg

GRAFOIL[®] GTB Flexible Graphite

Product Family

Single Layer Material – Inhibited (Service to 525°C) GTB – 98% Graphite, FSA G-604-07 Method A

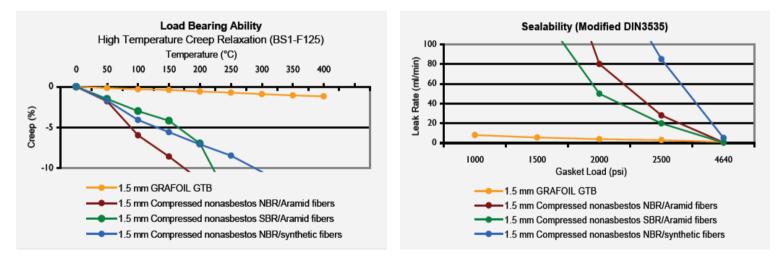
Product Overview

GRAFOIL[®] GTB flexible graphite is inhibited against oxidation and corrosion for use in most industrial fluid sealing applications.

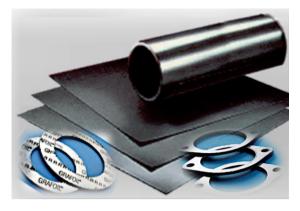
Applications

Most standard industrial fluid sealing applications, including:

- Chemicals
- Petrochemicals
- Refinery
- Steam service



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* GRAFOIL [®] GTB	
Characteristic	Typical Value
Thickness	0.005" (0.13 mm) 0.010" (0.25 mm) 0.015" (0.38 mm) 0.020" (0.51 mm) 0.025" (0.64 mm) 0.030" (0.76 mm) 0.040" (1.02 mm) 0.060" (1.52 mm)
Width	24" (610 mm) 39.4" (1000 mm) – Not 0.005" (0.13 mm)
Length	100' (30.5 mm)
Bulk Density	70 lb/ft ³ (1.12 g/cc) 62.4 lb/ft ³ (1.00 g/cc)
Ash Content	1.8%
Carbon Content	98.2%
Leachable Chloride	10 ppm
Sulfur Content	550 ppm
Oxidation Weight Loss	3%
Compressibilty at 5000 psi (35 MPa) load	43% for 70 lb/ft ³
Recovery at 5000 psi (35 MPa) load	15% for 70 lb/ft ³
Tensile Strength	650 psi for 70 lb/ft ³
Operating Temperature	-400°F to 975°F (-240°C to 525°C)
Creep Relaxation Method: BSI-F 125 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 N2 at 32 MPa load	<1.5 ml/min for 70 lb/ft ³
Certification	Certify to Grade
Note: *Properties listed are typical and cannot b	be used as accept/reject specifications

GRAFOIL[®] GTJ Flexible Graphite

Product Family

Single Layer Material – Inhibited (Service to 525°C) GTJ – 99.8% Graphite

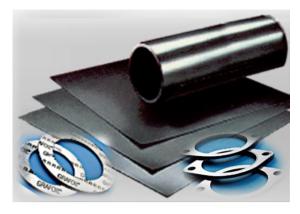
Product Overview

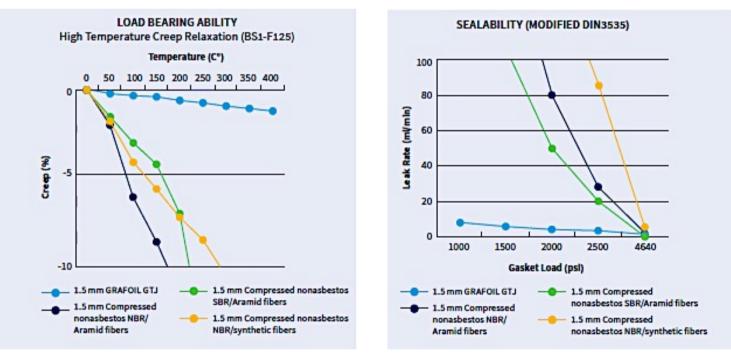
GRAFOIL[®] GTJ flexible graphite is a nuclearcertified and high-purity for use in nuclear applications. It is certified to meet General Electric Nuclear Nonmetallic Material Specification D50YP12 or Shell MESC SPE 85/203.

Applications

Applications that require an oxidation inhibitor

- Nuclear
- Semiconductor
- High temperature, High purity





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* GRAFOIL [®] GTJ	
Characteristic	Typical Value
Thickness	0.010" (0.25 mm) 0.015" (0.38 mm) 0.020" (0.51 mm) 0.030" (0.76 mm)
Width	24" (610 mm)
Length	100' (30.5 mm)
Bulk Density	$70 \text{ lb/ft}^3 (1.12 \text{ g/cc})$
Ash Content	0.5%
Carbon Content	99.8%
Leachable Chloride	<10 ppm
Sulfur Content	450 ppm
Total Chlorides	<50 ppm
Total Fluorides	<50 ppm
Total Halogens	40 ppm
Total Nitrates	10 ppm
Mercury (Hg)	<0.5 ppm
Phosphorus	500 ppm
Aluminum (Al)	15 ppm
Copper (Cu)	<10 ppm
Operating Temperature	-400°F to 975°F (-240°C to 525C)
Certification	Certify to Grade
Note: *Properties listed are typical and cannot	ot be used as accept/reject specifications

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GRAFOIL[®] GTX Flexible Graphite

Product Family

Single Layer Material – Inhibited (Service to 525°C) GTX – 98% Graphite, SHELL MESC 85/203

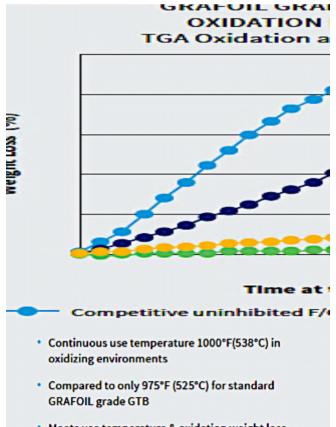
Product Overview

GRAFOIL® GTX flexible graphite meets the requirement of SHELL specification

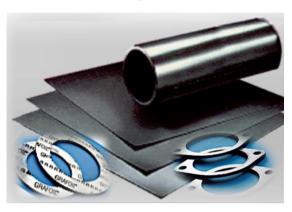
MESC SPE 85/203 and has a service temperature of 538°C (1000°F). Meets PVRC-SRC flexible graphite specification and is rated as FG600 material.

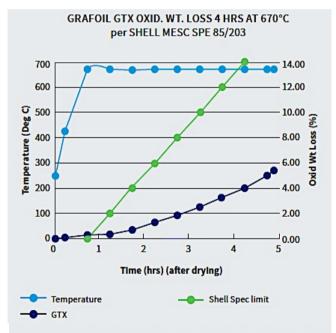
Applications

- Heat exchanger gaskets
- Internal combustion gaskets
- Diesel exhaust gaskets
- Turbo charger gaskets



 Meets use temperature & oxidation weight loss limits of proposed CAPI specifications for F/G





- Meets SHELL flexible graphite material specification MESC SPE 85/203 dtd May 2010
- Shell Specification Oxidation Weight Loss Limit = 16%

Characteristic	Typical Value
	0.015" (0.38 mm)
Thickness	0.020" (0.51 mm)
	0.030" (0.76 mm)
Width	39.4" (1000 mm)
Length	100' (30.5 mm)
Bulk Density	$70 \text{ lb/ft}^3 (1.12 \text{ g/cc})$
Ash Content**	1%
Leachable Chloride	< 10 ppm
Sulfur Content	750 ppm
Oxidation Weight Loss (593°C for 24 hours)	5%
Compressibility	43% for 70 lb/ft ³
at 5000 psi (35 MPa) load	
Recovery at 5000 psi (35 MPa) load	15% for 70 lb/ft ³
Operating Temperature	-400°F to 975°F (-240°C to 525°C)
Creep Relaxation Method: BSI-F 125 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 N2 at 32 MPa load	<1.5 ml/min for 70 lb/ft ³
Certification	Certify to Grade

*Properties listed are typical and cannot be used as accept/reject specifications. **Ash content is corrected for oxidation inhobitor addition.

GRAFOIL[®] SUPER GTOTM Flexible Graphite

Product Family

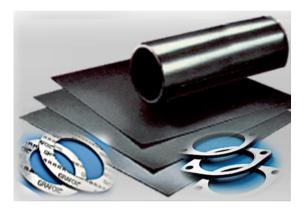
Single Layer Material – Inhibited (Service to 525°C) SUPER GTOTM – 97% Graphite, FSA G-604-07 METHOD A

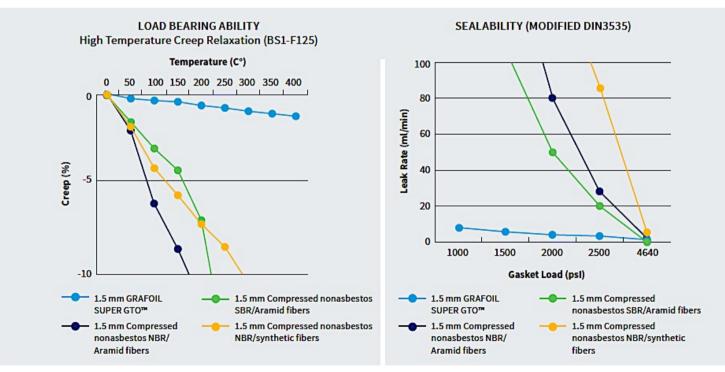
Product Overview

GRAFOIL[®] SUPER GTO[™] flexible graphite is inhibited against oxidation and corrosion specifically for use in automotive and internal combustion applications

Applications

• Exhaust system where oxidation resistance is critical.





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

Characteristic	Typical Value
Thickness	0.015" (0.38 mm)
	0.030" (0.76 mm)
Width	39.4" (1000 mm)
Length	100' (30.5 mm)
Bulk Density	70 lb/ft ³ (1.12 g/cc)
Ash Content	3%
Carbon Content	97%
Moisture	0.10%
Leachable Chloride	< 10 ppm
Oxidation Weight Loss	3%
Compressibilty	43%
at 5000 psi (35 MPa) load	1570
Recovery at 5000 psi (35 MPa) load	13%
Operating Temperature	-400°F to 975°F (-240°C to 525°C)
Creep Relaxation Method: BSI-F 125 at 6391 psi (44.1 MPa) load up to 400°	<3% for 70 lb/ft ³
Sealability Method: Mod DIN 3535 at 580 psi N2 at 32 MPa load	<1.5 ml/min for 70 lb/ft ³
Certification	Certify to Grade