



Specification Sheet

GRAFTITE

Pure expanded mineral graphite laminated. Due to the natural characteristics of graphite this is a high quality material with a universal use in high pressure and temperature services. Furthermore, it has excellent resistance to steam.

CHARACTERISTICS.

This material meets most refinery, petrochemical and industrial service requirements And has unsurpassed leak tight sealability over extended periods of time and service temperature it is permanently resilient, non-hardening, non- ageing, and has infinite shelf life.

Colour:	Black (Graphite)
Thickness: (1.5 mm an above for Tanged)	0.5,0.8,1.0,1.5,2.0,3.0mm
Tolerance of thickness	±0.03mm to ±0.06mm
Standard sheet dimensions:	1000 mm x 1000mm.
Other dimensions on request.	

High temperature creep and blowout resistance, naturally lubricious, requiring no flange release agent, maximum chemical resistance to a wide range of products and Fire safe

TECHNICAL DATA.

Carbon content:	(JB/T 9141.6)	99%
Ash content:	(ASTM C561)	≤1.0%
Chloride content:	(ASTM F1277)	≤50ppm
Sulphur content:	(ASTM C 816)	≈1300ppm
Flouride content:		≤30ppm
Density:		1.0g/cm ³
Compressibility:	(ASTM F-36/A)	35 - 55%
Compression factors:	(DIN28091)	KSW 35-55% KRW 3-5% WSW <4 WRW 3-4%
Resistance strength:	(DIN52913)	>48 MPa
Recovery:	(ASTM F-36/A)	≥9%
Leakage rate:	(DIN 3535)	≤ 0.1 mg/m.s
Tensile Strength:	(ASTM F152)	≥4.0 mpa
<u>Functional temperature range.</u>		
Non-oxidising environment:		-200 to 3000°C
Air or oxygen environment:		-200 to 400°C
Sublimation point:		3300°C
Max pressure:	Laminated	150 bar
	Tanged	200 bar

GRADES

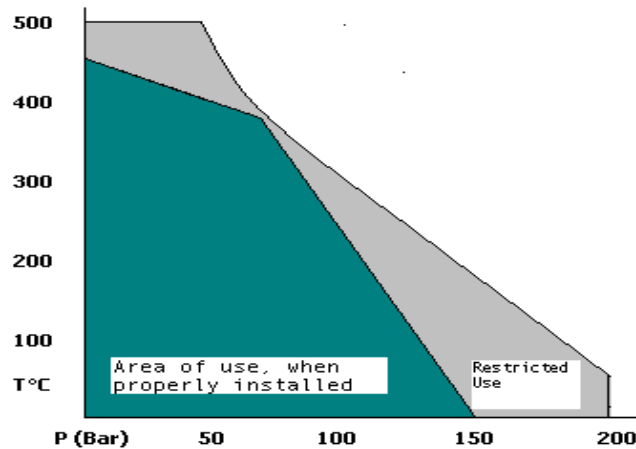
GRAFTITE LAMINATE: Laminated with flat 316L stainless steel insert (0.05mm thick) Recommended for steam applications.

GRAFTITE TANGED: Laminate mechanically bonded to a 316L stainless steel-tanged insert (0.1 mm thick) – designed for high pressure and temperatures.



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Temperature v
Pressure loading of
typical gasket
application in Graftite
materials



CHEMICAL RESISTANCE

Flexible graphite is resistant to attack by virtually all common organic and inorganic fluids except concentrated, highly oxidizing mineral acids. It is compatible with the entire pH range from 0 to 14 as shown in table 1 below.

Limiting Conditions

FLUID	CONCENTRATION (%)	FLUID TEMPERATURE (°C)
Sulphuric acid	70	170
Nitric acid	10	85
Aqua regia	Any	Any
Chromic	Any	Any

RESISTANCE TO FLUIDS ASTM-146.

Test fluid immersion Time & temperature	Maximum increase after immersion	
	Thickness (%)	Weight (%)
Fuel B, 70% ISO OCTANO, 30% TOLUENO 5h; room temperature	3	12
ASTM - OIL No. 3 5h. 150 °C	5	-

Good performance and a long service life of gaskets depend in large measures on the fitting and operation conditions, over which The British Gasket Group has no control. The data given on this technical sheet should not be used as application limits, but as guidance for an appropriate choice. We can offer guarantees only for the quality of our products.

GRAFITTE