

## Flexicarb® RGS-HP



**High performance, oxidation resistant, multilayer reinforced graphite sheet gasket material.**

Flexicarb® RGS-HP is a **high performance** reinforced graphite laminate sheet sealing material comprised of several layers of stainless steel and high purity, oxidation resistant flexible graphite. Individual lamina of graphite and stainless steel are fused together using a proprietary process resulting a high strength laminate with outstanding load bearing characteristics. Additional impregnation of the fused laminate reduces leakage under low assembly stress applications, improves handling and installation and aids gasket release on removal.

### APPLICATIONS

- Suitable of high pressure, up to 250 bar, high temperature applications.
- Standard Class and PN rated flanges including tongue and groove flange face configurations.
- Non-standard connections, heat exchangers, vessels, sight glasses, valve bonnets etc.
- Medium and high pressure steam service.
- Large sheet size of 1,500 x 1,500 mm enabling the manufacture of large single piece gaskets.
- Temperature range from -250°C to 550°C.  
Consult Flexitallic when application temperature exceeds 450°C.

This Data Sheet refers to the material as supplied. The information contained herein is given in good faith, but no liability will be accepted by the Company in relation to same.

We reserve the right to change the details given on this Data Sheet as additional information is acquired. Customers requiring the latest version of this Data Sheet should contact our Applications Engineering Department.

The information given and, in particular, any parameters, should be used for guidance purposes only. The Company does not give any warranty that the product will be suitable for the use intended by the customer.

### Health & Safety

For further Health and Safety information please see the relevant Material Safety Datasheets or contact Flexitallic UK Ltd.

### PROPERTIES

- Excellent mechanical characteristics across a wide range of assembly stresses and operating temperatures.
- Low load loss even under extreme application conditions.
- Inherent blow-out resistance.
- Excellent chemical resistance.
- Enhanced long term sealing performance in elevated temperature service.
- High purity graphite mitigates flange face crevice and stress

TYPICAL PROPERTIES	RGS-HP			
Thickness	mm	1.5	3.0	
Sheet Dimensions	m	1.0 x 1.0 1.5 x 1.5	1.0 x 1.0 1.5 x 1.5	
Bulk density	g/cm <sup>3</sup>	1.1	1.1	
Steel Reinforcement Plies	Qty	2	5	
Steel Reinforcement Grade	AISI	316 (L)	316 (L)	
Steel Reinforcement Thickness	mm	0.05	0.05	
Carbon Content	%wt	≥ 99	≥ 99	
Ash Content	%wt	≤ 1	≤ 1	
Total Sulphur	ppm	< 300	< 300	
Total Chloride	ppm	≤ 25	≤ 25	
Compressibility	%	35	35	
Recovery	%	5	5	
Hot Creep	%	≤ 3	≤ 3	
$\delta_{VO}$	N/mm <sup>2</sup>	> 280	> 230	
$\delta_{BO/300^{\circ}C}$	N/mm <sup>2</sup>	> 220	> 170	
$\delta_{VU/0.1}$	10bar	N/mm <sup>2</sup>	8	9
	16bar	N/mm <sup>2</sup>	10	12
	25bar	N/mm <sup>2</sup>	14	16
	40bar	N/mm <sup>2</sup>	19	23
Oxidisation rate in air 670 °C BS EN 14772 (6.7)	%wt/h	≤ 3.0	≤ 3.0	
ASME Gasket Factor 'm'	m	2.5	2.5	
ASME Gasket Seating Stress 'y'	psi	3000	3000	