

GRAPHITE SHEET STYLE : LGR

WITH FLAT STAINLESS STEEL PLATE INSERT



Material profile:

- Made of expanded graphite reinforced with flat stainless steel SUS316 (0.05mm,thickness), used as gasket material.
- **LGR** is a laminated sealing sheet, reinforced with adhesively bonded flat 316 stainless steel insert, made from industrial grade flexible graphite (> 98.0% carbon content).
- **LGR** is typically used as a gasket material for pumps, valves and fittings, where small gasket thickness' are recommended.
- Due to the use of adhesive, this material is not recommended to be used above internal pressures of 25 bar and should not be stressed to more than 60 N/mm^2 , when operated at elevated temperatures.
- Standard thickness': 0.50 mm; 1.0 mm; 1.5 mm; 2.0 mm; 3.0 mm
- Standard sheet sizes: 1000 x 1000 mm, 1500 x 1500 mm

Product survey

Product	Characteristics	Recommended applications
LGR	Reinforced with bonded stainless steel foil	Pumps; fittings; gas;offshore; waste gas pipelines

Applications

- Gaskets for pumps and fittings, recommended for small thicknesses.
- For gas and offshore technology.
- For unstable flanges with low gasket stresses and for waste gas pipelines, eg. In incineration plants.
- For gaskets in raised face flanges; for low internal pressures up to 25 bar and mean gasket stresses s BO up to 60 N/mm^2 ; if the temperature of the gasket is low during operation, s BO may be higher.
- For corrosive media within the limits imposed by the stainless steel foil and adhesive film.

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Properties

- Reinforced with stainless steel sheet; easy to handle.
- Soft, adaptable.
- Low permeability to gases and liquids, even at low gasket stresses.
- Can be used from cryogenic temperatures up to more than 500 °C depending on installation and operating conditions, and the desired service life:
 - in an inert atmosphere up to approx.800 °C (limits imposed by metal reinforcement);
 - in steam up to approx. 500 °C;
 - for applications of more than approx.400 °C in air, users should request our advice.
- Good resistance to chemicals.
- Asbestos-free, presents no health hazard.
- No ageing or embrittlement of the graphite layers.
- Long-term stability of compressibility and recovery over a wide temperature range.
- No measurable cold or warm flow up to maximum permissible gasket stress.
- Thin adhesive film of less than 10 µm with low chloride content.

Property	Standard	Unit	Data
Density (graphite)		g/cm ³	1.0
Compressibility	ASTM F36/A	%	35-55
Recovery	ASTM F36/A	%	≥9
Leakage rate	DIN 3535	ml/min	≤0.10
Temperature :			
Max.temp. (inert atmosphere)		°C	2500
Continual work temp.		°C	250
Fluid resistant :	ASTM F146		
<u>-ASTM 3# oil 150°C, 5h</u>			
weight increase		%	<15
Thickness increase		%	≤6
<u>'-LLC50% 100°C,22h</u>			
weight increase		%	<15
Thickness increase		%	≤6
Sulfur content	ASTM C 816	ppm	≈ 700
Leachable Chloride content	ASTM F1277	ppm	50
Carbon content	JB/T 9141.6	%	≥98.5
Flouride content		ppm	≤30

Data reported corresponds to laboratory and field tests typical results. Technical guidance are pleased to assistant when requested.

Supply data :

- 1). Size in mm : 1500 x 1500
- 2). Thickness : 1.0mm, 1.5mm, 2.0mm, 3.0mm
- 3). Special size and thickness upon request.

