



TECHNICAL DATA SHEET

Basis

Flexible graphite sheets

GRAFILIT. **SF** – without insertion

GRAFILIT. **SL** – laminated with flat stainless-steel insertion (AISI 316; 0.05 mm)

GRAFILIT. **SP** – mechanically bonded to a tonged stainless-steel insertion (AISI 316; 0.1 mm)

General properties and application

Flexible graphite gasket materials exhibit excellent creep, strength, chemical stability and high tightness. They are ideal for a wide range of applications under various conditions at high temperature and pressure, mechanical and thermal cycles and shocks. Flexible graphite gasket materials are suitable to confine steam as well as practically all chemicals. Exceptions are strong oxidizing media such as nitric acid, chromic acid, etc.

Approvals: DIN-DVGW, HTB, KTW, BAM, GERMANISCHER LLOYD

Comforms to DIN 28091-4

Technical data

(typical values)		GRAFILIT. SF	GRAFILIT. SL	GRAFILIT. SP
Continuous use max. temperature*				
• Air or oxidizing atmosphere		450°C / 842°F	450°C / 842°F	450°C / 842°F
• Reducing or inert atmosphere		2500°C / 4532°F	700°C / 1292°F	700°C / 1292°F
Continuous use min. temperature*		-200°C / -328°F	-200°C / -328°F	-200°C / -328°F
Continuous use max. pressure*		80 bar / 1160 psi	100 bar / 1450 psi	200 bar / 2900 psi
Compressibility	ASTM F36	45 %	45 %	35 %
Recovery	ASTM F36	13 %	13 %	17 %
Stress resistance (16 h, 300°C)	DIN 52913	49 N/mm ²	49 N/mm ²	49 N/mm ²
Permeability to nitrogen (40 bar, RT)	DIN 3535/6	<0.02 mg/(s.m)	<0.05 mg/(s.m)	<0.05 mg/(s.m)
Ash content of graphite	DIN 51903	<1 %	<1 %	<1 %
Chloride content	FSA NMG 202-02	<50 ppm	<50 ppm	<50 ppm
Fluoride content	FSA NMG 203-02	<50 ppm	<50 ppm	<50 ppm
Density of the graphite	DIN 28090-2	1.0 g/cm ³	1.0 g/cm ³	1.0 g/cm ³
Compression modulus	DIN 28090-2			
• at room temperature: ϵ_{KSW}		38 %	41 %	32 %
• at elevated temperature: $\epsilon_{WSW/300^\circ C}$		0.9 %	1.1 %	1.2 %
Percentage creep relaxation	DIN 28090-2			
• at room temperature: ϵ_{KRW}		5.0 %	4.5 %	4.5 %
• at elevated temperature: $\epsilon_{WRW/300^\circ C}$		4.5 %	4.0 %	4.0 %
Recovery R	DIN 28090-2	0.088 mm	0.080 mm	0.086 mm

*Service limits are recommended for proper sealing conditions and gaskets design

Supply data

Sheet size—standard: 1000 X 1000 mm, 1500 X 1500 mm

Thickness—standard: GRAFILIT. **SF**: 1.0, 1.5, 2.0, 2.5, 3.0 mm
 GRAFILIT. **SL**: 1.0, 1.5, 2.0, 3.0 mm
 GRAFILIT. **SP**: 1.0, 1.5, 2.0, 3.0 mm

GRAFILIT. **SF** is also available in rolls:

Width: 4-1000 mm, Length—standard: 50 m

Thickness—standard: 0.5, 0.8 mm

Other dimensions are available on request.

All information data quoted are based on years of experience in production and operation of sealing elements. However, in view of the wide variety of possible installation and operating conditions one cannot draw final conclusions in all application cases regarding the behaviour in a gasket joint. The data may not, therefore, be used to support any warranty claims. Whenever there is any doubt, our staff will be pleased to assist you in finding the optimum sealing solutions.