

PAF-GRA SSF is a gasket manufactured by the insertion of stainless-steel foil into exfoliated pure graphite. Similar to other PALMFOX graphite-based gaskets, this style has remarkable chemical and thermal stability. Furthermore, appropriate compressibility and creep resistance in these sealing systems have made them applicable in challenging working environments. Utilization of this style is also possible in sealing required conditions with a low-bolt load.



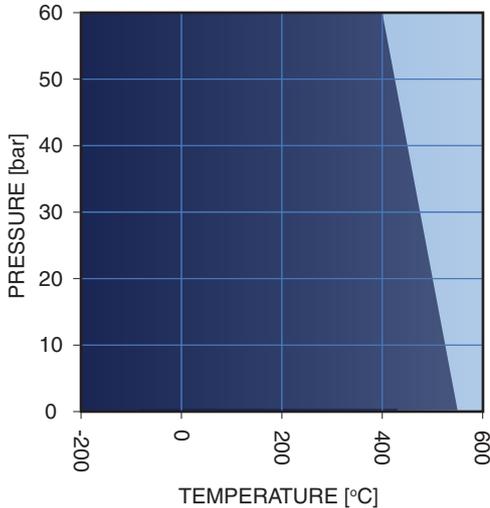
TECHNICAL DATA:

TYPICAL VALUES FOR A THICKNESS OF 1.5 MM				
Compressibility	ASTM F 36 A	-	%	40
Recovery	ASTM F 36 A	-	%	15
Stress resistance	DIN 52913	50 MPa, 16 hours at 300°C	MPa	47
Specific leak rate	DIN 5535-6	-	mg/[s.m]	0.04
Compression Modulus	DIN 28090-2	At 23°C At 300°C	% %	40 1.2
Creep relation	DIN 28090-2	At 23°C At 300°C	% %	4.5 3.5
Density	DIN 28090-2	-	g/m ³	1.4
Temperature (Min.)	-	-	°C (°F)	-200 (-330)
Continuous temperature (Max.)	-	In oxidizing atmosphere In reducing or inert atmosphere	°C (°F) °C (°F)	600 (1100) 700 (1300)
Pressure (Max.)	-	For demanding gasses For steam and gasses For liquids	bar (psi) bar (psi) bar (psi)	60 (870) 120 (1740) 150 (2175)

APPLICATIONS:

Chemical and petrochemical industries, Potable water, Gas and Steam supply, Compressor, Pumps and Valves, Power plant.

P-T DIAGRAM



■ In the darker shaded region (dark blue) the gasket is generally applicable for different chemical substances and is highly able to offer chemical compatibility.

■ In workplaces with the conditions this area, technical assessment of gasket material is recommended.

■ In the light blue region, installation of gasket without technical assessment should not be carried out.

DIMENSIONS

Size (mm):	1520*1520 mm 2020*1520 mm
Thickness (mm):	0.5, 0.8, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0
Tolerances (mm):	Up to 1.0 mm thickness: ± 0.1 mm Above 1.0 mm thickness: $\pm 10\%$ Length & Width: $\pm 5\%$
Surface finish:	Color: Black

CHEMICAL RESISTANCE CHART

PAFGRA SSF		PAFGRA SSF	
Acetamide	✓	Black liquor	?
Acetic acid 10%	✓	Borax	✓
Acetic acid 100% (Glacial)	?	Boric acid	✓
Acetone	✓	Butadiene (gas)	✓
Acetonitrile	✓	Butane (gas)	✓
Acetylene (gas)	✓	Butyl alcohol (Butanol)	✓
Acid chlorides	?	Butyric acid	✓
Acrylic acid	✓	Calcium chloride	?
Acrylonitrile	✓	Calcium hydroxide	✓
Adipic acid	✓	Carbon dioxide (gas)	✓
Air (gas)	✓	Carbon monoxide (gas)	✓
Alcohols	✓	Cellosolve	✓
Aldehydes	✓	Chlorine (gas)	?
Alum	?	Chlorine (in water)	i
Aluminium acetate	?	Chlorobenzene	✓
Aluminium chlorate	?	Chloroform	✓
Aluminium chloride	✗	Chloroprene	✓
Aluminium sulfate	✓	Chlorosilanes	?
Amines	✓	Chromic acid	✗
Ammonia (Gas)	✓	Citric acid	?
Ammonium bicarbonate	✓	Copper acetate	✓
Ammonium chloride	?	Copper sulfate	✓
Ammonium hydroxide	✓	Creosote	✓
Amyl acetate	✓	Cresols (Cresylic acid)	✓
Anhydrides	✓	Cyclohexane	✓
Aniline	✓	Cyclohexanol	✓
Anisole	✓	Cyclohexanone	✓
Argon (gas)	✓	Decalin	✓
Asphalt	✓	Dextrin	✓
Barium chloride	?	Dibenzyl ether	✓
Benzaldehyde	✓	Dibutyl phthalate	✓
Benzene	✓	Dimethylacetamide (DMA)	✓
Benzoic acid	✓	Dimethylformamide (DMF)	✓
Bio-diesel	✓	Dioxane	✓
Bio-ethanol	✓	Diphyl (Dowtherm A)	✓

 Suitable
  Depends on operating conditions
  Unsuitable
  No data or insufficient evidence

CHEMICAL RESISTANCE CHART

PAFGRA SSF		PAFGRA SSF	
Esters	✓	Iron sulfate	✓
Ethane (Gas)	✓	Isobutane (Gas)	✓
Ethers	✓	Isooctane	✓
Ethyl acetate	✓	Isoprene	✓
Ethyl alcohol (Ethanol)	✓	Isopropyl alcohol (Isopropanol)	✓
Ethyl cellulose	✓	Kerosene	✓
Ethyl chloride (gas)	✓	Ketones	✓
Ethylene (gas)	✓	Lactic acid	?
Ethylene glycol	✓	Lead acetate	✓
Formaldehyde (Formalin)	✓	Lead arsenate	✓
Formamide	✓	Magnesium sulfate	✓
Formic acid 10%	i	Maleic acid	✓
Formic acid 85%	?	Malic acid	?
Formic acid 100%	?	Methane (Gas)	✓
Freon-12 (R-12)	✓	Methyl alcohol (Methanol)	✓
Freon-134a (R-134a)	✓	Methyl chloride (Gas)	✓
Freon-22 (R-22)	✓	Methylene dichloride	✓
Fruit juices	✓	Methyl ethyl ketone (MEK)	✓
Fuel oil	✓	N-Methyl-pyrrolidone (NMP)	✓
Gasoline	✓	Milk	✓
Gelatin	✓	Mineral oil type ASTM 1	✓
Glycerine (Glycerol)	✓	Motor oil	✓
Glycols	✓	Naphtha	✓
Helium (gas)	✓	Nitric acid 10%	?
Heptane	✓	Nitric acid 65%	?
Hydraulic oil (Glycol based)	✓	Nitrobenzene	✓
Hydraulic oil (Mineral)	✓	Nitrogen (Gas)	✓
Hydraulic oil (Phosphate ester-based)	✓	Nitrous gases (NOx)	?
Hydrazine	✓	Octane	✓
Hydrocarbons	✓	Oils (Essential)	✓
Hydrochloric acid 10%	✗	Oils (Vegetable)	✓
Hydrochloric acid 37%	✗	Oleic acid	✓
Hydrofluoric acid 10%	✗	Oleum (Sulfuric acid, fuming)	✗
Hydrofluoric acid 48%	✗	Oxalic acid	?
Hydrogen (gas)	✓	Oxygen (gas)	✓

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CHEMICAL RESISTANCE CHART

PAFGRA SSF		PAFGRA SSF	
Palmitic acid	✓	Sodium hydroxide	✓
Paraffin oil	✓	Sodium hypochlorite (Bleach)	✗
Pentane	✓	Sodium silicate (Water glass)	✓
Perchloroethylene	✓	Sodium sulfate	✓
Petroleum (Crude oil)	✓	Sodium sulfide	?
Phenol (Carbolic acid)	✓	Starch	✓
Phosphoric acid, 40%	?	Steam	✓
Phosphoric acid, 85%	?	Stearic acid	✓
Phthalic acid	✓	Styrene	✓
Potassium acetate	✓	Sugars	✓
Potassium bicarbonate	✓	Sulfur	✓
Potassium carbonate	✓	Sulfur dioxide (Gas)	✓
Potassium chloride	✓	Sulfuric acid 20%	✗
Potassium cyanide	✓	Sulfuric acid 98%	✗
Potassium dichromate	?	Sulfuryl chloride	✗
Potassium hydroxide	✓	Tar	✓
Potassium iodide	✓	Tartaric acid	?
Potassium nitrate	✓	Tetrahydrofuran (THF)	✓
Potassium permanganate	?	Titanium tetrachloride	✗
Propane (gas)	✓	Toluene	✓
Propylene (gas)	✓	2,4-Toluenediisocyanate	✓
Pyridine	✓	Transformer oil (Mineral type)	✓
Salicylic acid	✓	Trichloroethylene	✓
Seawater/brine	?	Vinegar	✓
Silicones (oil/grease)	✓	Vinyl chloride (gas)	✓
Soaps	✓	Vinylidene chloride	✓
Sodium aluminate	✓	Water	✓
Sodium bicarbonate	✓	White spirits	✓
Sodium bisulfite	✓	Xylenes	✓
Sodium carbonate	✓	Xylenol	✓
Sodium chloride	✓	Zinc sulfate	✓
Sodium cyanide	✓		



Suitable



Depends on operating conditions



Unsuitable



No data or insufficient evidence