

**PAF-RED 510** is another sheet gasket made from a combination of compressed non-asbestos mineral fiber with an NBR binder. This sealing system is particularly designed for gaseous materials with low temperatures and pressure. It is also applicable in working conditions with low bolt loads.



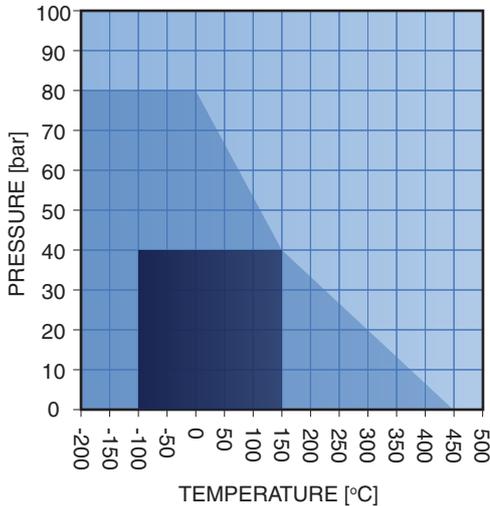
### TECHNICAL DATA:

TYPICAL VALUES FOR A THICKNESS OF 2.0 MM				
Compressibility	ASTM F 36 J	-	%	22
Recovery	ASTM F 36 J	-	%	55
Cold/Hot Compression	50 MPa	Thickness decrease at 23°C	MPa	12
		Thickness decrease at 300°C	MPa	15
Thickness increase after fluid immersion	ASTM F 146	Oil IRM 903: 5 hours at 150°C	%	8
	ASTM F 146	Fuel B: 5 hours at 23°C	%	13
Density	-	-	g/cm <sup>3</sup>	1.55
Temperature (Max.)	-	-	°C (°F)	+450 (+840)
Temperature (Min.)	-	-	°C (°F)	-200 (-320)
Continuous temperature (Max.)	-	-	°C (°F)	+250 (+480)
Pressure (Max.)	-	-	bar (psi)	80 (2030)

## APPLICATIONS:

Refrigerants, Oils, Hydrocarbons and several chemicals.

## 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

<b>Size (mm):</b>	1000*1500 mm   1500*1500 mm   2000*1500 mm   3000*1500 mm
<b>Thickness (mm):</b>	0.5, 0.8, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0
<b>Tolerances (mm):</b>	Up to 1.0 mm thickness: $\pm 0.1$ mm Above 1.0 mm thickness: $\pm 10\%$ Length & Width: $\pm 5\%$
<b>Surface finish:</b>	Color: Red

## CHEMICAL RESISTANCE CHART

PAFRED 510		PAFRED 510	
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)	✗
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

PAFRED 510		PAFRED 510	
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%	✓	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 (ASTM no.1)	✓
Glycerine (Glycerol)	✓	Motor oil	✓
Glycols	✓	Naphtha	✓
Helium (gas)	✓	Nitric acid, 10%	✗
Heptane	✓	Nitric acid, 65%	✗
Hydraulic oil (Glycol based)	✓	Nitrobenzene	✗
Hydraulic oil (Mineral type)	✓	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)	✗



Suitable



Depends on operating conditions



Unsuitable



No data or insufficient evidence

## CHEMICAL RESISTANCE CHART

PAFRED 510		PAFRED 510	
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



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