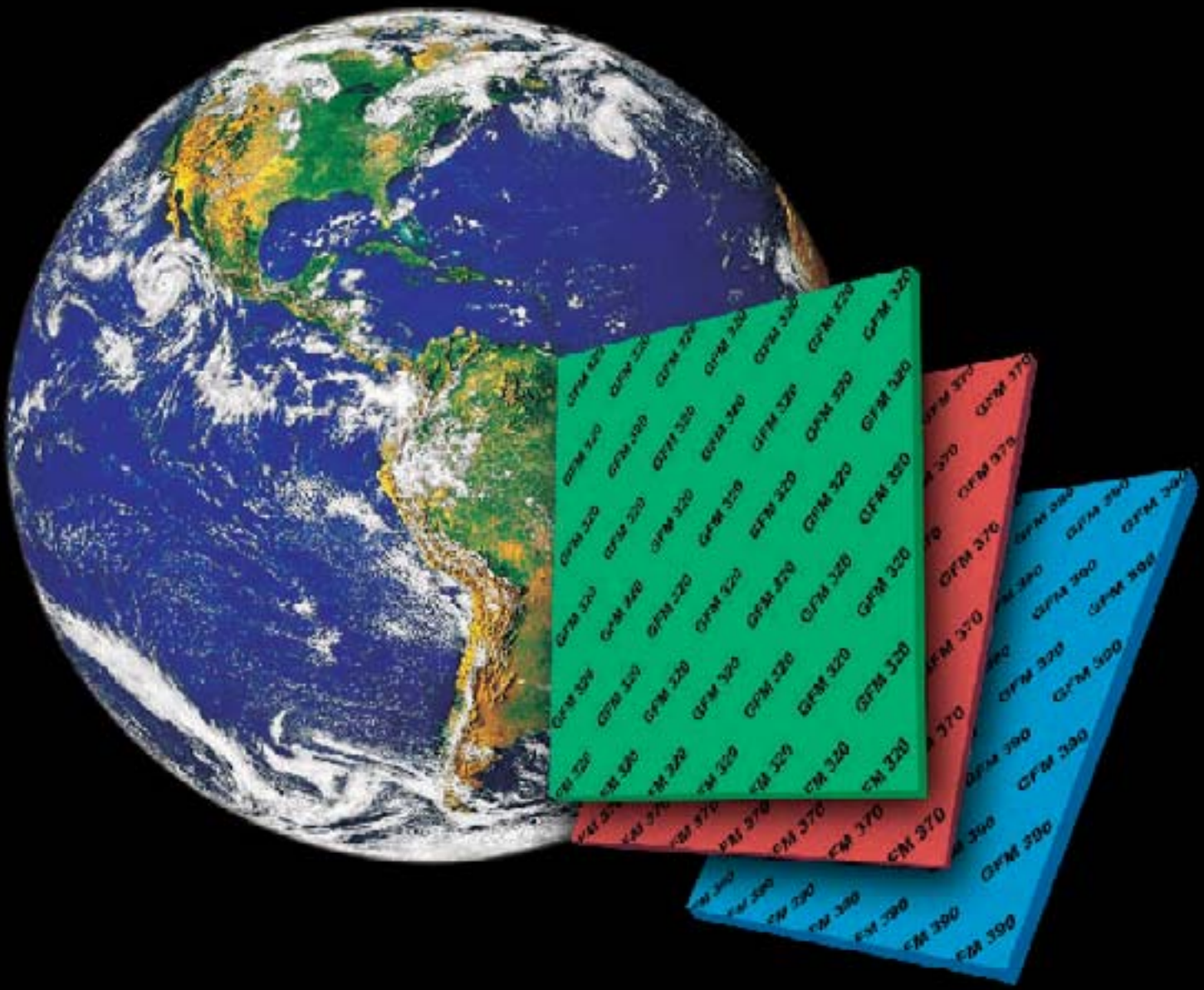
Non Asbestos Jointing Sheets

ISO:9001-2000 & ČSN-EN 559: 2003



Gufero®

Water • Steam • Alkalies • Oil • Hydraulics • Acids • Gases • Solvents

www.gufero.com

General Data

Standard Sheet Size 1500x1500mm

Thickness 0.25mm to 3.00mm (For Non-Metalic Range)
0.80mm to 3.00mm (For Metalic Range)

Tolerances Thickness ≤ 1mm = ± 0.10mm Lenght ± 50mm
>1mm = ± 0.10% Width ± 50mm

All information and recommendations given in this brochure are correct to the best of our knowledge. Since conditions of use are beyond our control, the information provided can only serve as a guideline. Users must satisfy themselves that products are suitable for the intended processes and uses. We reserve the right to change product desing and properties without notice.
Should you have any doubts about the choice of gasket material, please refer to us. Our Engineering cell will be happy to assist you.

Graphite coating & antistick coating are available on reguest.

Properties Applicable for 2.0 mm thick material.

GFM 390

Aramid Fibre, Mineral Fibre, High Quality NBR & Organic Fibre.

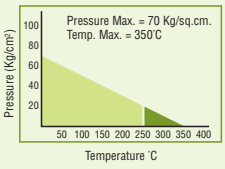
- Water/Oil resistant
- For light to medium loadings
- Suitable for low operating pressure, e.g. transformers, compressors and oil pans in internal combustion engines.

Density			**gm / cm³**	**1.50 - 1.90**
Tensile Strength				
a) Acc to ASTM F 152 (Across Grain)			N/mm²	≥ 7
b) Acc to DIN 52910 (Across Grain)			N/mm²	≥ 5
Compressibility		ASTM F36A	%	7 - 15
Recovery		ASTM F36A	%	≥ 40
Fluid Absorption				
In ASTM Oil No.3		ASTM F146	%	
Increase in Mass				≤ 15
Increase in Thickness				≤ 10
In Fuel B		ASTM F146	%	
Increase in Mass				≤ 10
Increase in Thickness				≤ 10
In Water/Antifreeze		ASTM F146	%	
Increase in Mass				≤ 15
Increase in Thickness				≤ 5
In Acid (Change in Tensile Strength)				
96% H_2SO_4 Acid (48 hrs. at 23˚C)			%	
95% HNO_3 Acid (48 hrs. at 23˚C)			%	
Ignition Loss		DIN 52911	%	≤ 40
Sealability Against Nitrogen		DIN 3535	Cm^3/min.	
Stress Resistance				
16h 300˚C		DIN 52913	N/mm²	-
16h 175˚C		DIN 52913	N/mm²	-
Design Info: M Value				2.5
Y Value			(mpa)	25
Max. Peak Temp.			**˚C**	**350**
Max. Continuous Temp.			**˚C**	**250**
Max. Operating Pressure			**Kg/cm²**	**70**
ASTM F104 Line call-out				F712122A9B5E12M4

Max. values of temperature and pressure should not be used simultaneously, they are given only as guidance. Max. temperature and pressure depends not only on the type of gasket material but also on the application conditions such as thickness of material, nature of service medium type of flange, surface stress etc.

Performance Chart and Recommendation

- Uncritical for application, provided Gufero assembly rules are followed.
- Only for shortterm temp. excursions.
- Application might be okay, but is critical kindly consult Gufero technical support.



GFM 370

Aramid Fibre,
Mineral Fibre and NBR.

- Water/Oil resistant
- For light to medium loadings
- For low operating pressure e.g. transformers, compressors, valve covers and oil pans in IC Engines.

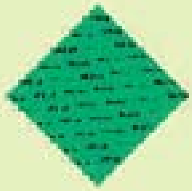
GFM 300

Aramid Fibre,
Mineral Fibre and NBR.

- Oil resistant
- For medium to higher loadings
- Resistance to water & gases e.g. compressors, pipelines, gas meters and IC engines.

Comforms to
BS - 7531 Grade Y

GFM 320



Aramid Fibre,
Mineral Fibre and NBR.

- High performance oil resistant
- For high loading
- Excellent thermal, chemical & mechanical properties.
- For compressors, pipelines, gas meters and IC Engines, pipeunions, pumps etc.

Comforms to
BS - 7531 Grade X

GFM 450 CF

Aramid Fibre,
Carbon Fibre NBR.

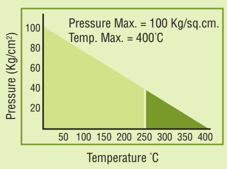
- For Medium to higher loadings
- Excellent for staem & Alkalies
- Chemical & petrochemical industries
- Pulp, paper, chemical & petrochemical industries

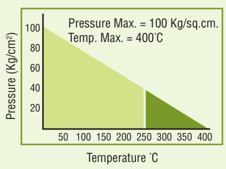
GFM 390 Steel

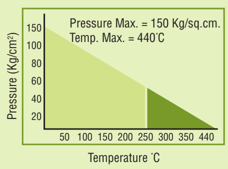
Aramid Fibre, NBR & Organic Fibre with
Metal Gauge Centre

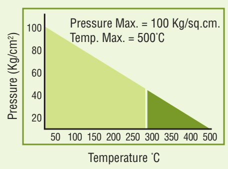
- Water/Oil Resistant
- For light to medium loadings
- Suitable for low operating pressure, e.g. transformers, compressors and oil pans in internal combustion engines.

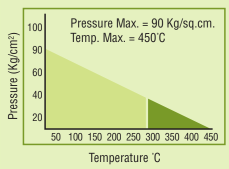
GFM 370	GFM 300	GFM 320	GFM 450 CF	GFM 390 Steel
1.70 - 2.00	**1.70 - 2.00**	**1.70 - 2.00**	**1.70 - 2.00**	**1.50 - 2.10**
≥ 8	≥ 10.5	≥ 14	≥ 8	≥ 7
≥ 5	≥ 7	≥ 11	-	≥ 5
7-15	7-15	6-12	7-12	7-15
≥ 50	≥ 50	≥ 50	≥ 50	≥ 40
≤ 15	≤ 10	≤ 10	≤ 10	≤ 15
≤ 10	≤ 10	≤ 8	≤ 8	≤ 10
≤ 10	≤ 10	≤ 10	≤ 10	≤ 10
≤ 10	≤ 10	≤ 7	≤ 7	≤ 10
≤ 15	≤ 10	≤ 15	≤ 10	≤ 15
≤ 5	≤ 5	≤ 5	≤ 7	≤ 5
≤ 35	≤ 36	≤ 30	≤ 30	≤ 40
≤ 1.0	≤ 1.0	≤ 0.5	≤ 0.5	
~ 20	~ 20	~ 25	20	-
~ 28	~ 30	~ 36	30	-
2.5	-	2.5	2.5	-
25	-	20	22	-
400	**400**	**440**	**500**	**450**
250	**250**	**250**	**250**	**250**
100	**100**	**150**	**100**	**90**
F712122A9B4E12M4	F712111A9B4E12M5	F712111A9B3E12M6	-	-











Chemical Resistance Chart

A - Recommended C - Recommendation depends on operating conditions X - Not recommended

	GFM 390	GFM 370	GFM 300	GFM 320	GFM 450 CF		GFM 390	GFM 370	GFM 300	GFM 320	GFM 450 CF
Acetaldehyde	C	C	C	C	C	Isobutane	A	A	A	A	C
Acetic acid 10%	A	A	A	A	A	Isooctane	A	A	A	A	A
Acetic acid 100%	A	A	A	A	A	Isopropyl alcohol	A	A	A	A	A
Acetic ester	C	C	C	C	C	Kerosene	A	A	A	A	A
Acetone	C	C	C	C	C	Lead acetate	A	A	A	A	A
Acetylene	A	A	A	A	A	Lime water	A	A	A	A	A
Adipic acid	A	A	A	A	A	Magnesium sulphate	A	A	A	A	A
Air	A	A	A	A	A	Mallic acid	A	A	A	A	A
Alum	A	A	A	A	A	Methane	A	A	A	A	A
Aluminium acetate	A	A	A	A	A	Methanol	A	A	A	A	A
Aluminium fluorde	A	A	A	A	A	Methyl chloride	X	C	C	C	C
Aluminium chloride	A	A	A	A	A	Methylene dichloride	X	X	X	X	X
Ammonia	A	A	A	A	C	Methyl ethyl ketone	C	C	C	C	C
Ammonium bicarbonate	A	A	A	A	C	Milk	A	A	A	A	A
Ammonium chloride	A	A	A	A	C	Mercury	A	A	A	A	A
Ammonium hydroxide	A	A	A	A	C	Natural Gas	A	A	A	A	A
Amyle acetate	C	C	C	C	C	Nitric acid 20%	X	X	C	C	A
AST Oil No. 3	A	A	A	A	A	Nitric acid 40%	X	X	C	C	A
Asphalt	A	A	A	A	A	Nitric acid 96%	X	X	X	X	X
Barium chloride	A	A	A	A	A	Nitrobenzene	X	X	X	X	X
Benzene	A	A	A	A	A	Nitrogen	A	A	A	A	A
Benzoic acid	X	C	C	C	C	Octane	A	A	A	A	A
Boric acid	A	A	A	A	A	Oleic acid	A	A	A	A	A
Borax	A	A	A	A	A	Oxalic acid	C	C	C	C	C
Brine	A	A	A	A	A	Oxygen	A	A	A	A	A
Butane	A	A	A	A	A	Palmitic acid	A	A	A	A	A
Butyl alcohol	A	A	A	A	C	Pentane	A	A	A	A	A
Butyric acid	A	A	A	A	A	Perchloroethylene	C	C	C	C	C
Calcium chloride	A	A	A	A	A	Phenol	X	X	X	X	X
Calcium hydroxide	A	A	A	A	C	Phosphoric acid	A	A	A	A	A
Carbon disulphide	X	X	X	X	X	Potassium acetate	A	A	A	A	A
Carbon dioxide	A	A	A	A	A	Potassium bicarbonate	A	A	A	A	A
Chloroform	A	C	C	C	C	Potassium carbonate	A	A	A	A	A
Carbon tetra chloride	C	C	C	C	C	Potassium chloride	A	A	A	A	A
Chlorine, wet	X	X	X	X	X	Potassium dichromate	A	A	A	A	A
Chromic acid	X	C	X	C	C	Potassium hydroxide	C	C	C	C	C
Citric acid	A	A	A	A	A	Potassium iodide	A	A	A	A	A
Copper chloride	C	C	C	C	C	Potassium nitrate	A	A	A	A	A
Creosole	X	X	A	X	C	Potassium permanganate	A	A	A	A	A
Cresol	X	C	C	C	C	Propane	A	A	A	A	A
Cyclohexanol	A	A	A	A	A	Pyridine	X	X	X	X	X
Dibenzyl ether	X	X	C	X	X	Salicylic acid	A	A	A	A	A
Dimethyl formamide	X	X	X	X	X	Silicone oil	A	A	A	A	A
Diesel oil	A	A	A	A	A	Skydrol	X	X	X	X	X
Ethane	A	A	A	A	A	Sodium aluminate	A	A	A	A	A
Ethyl acetate	C	C	C	C	C	Sodium bicarbonate	A	A	A	A	A
Ethyl alcohol	A	A	A	A	A	Sodium bisulphite	A	A	A	A	A
Ethyl chloride	C	C	C	C	C	Sodium carbonate	A	A	A	A	A
Ethylene	A	A	A	A	A	Sodium chloride	A	A	A	A	A
Ethylene glycol	C	A	A	A	A	Sodium cyanide	A	A	A	A	A
Ferric chloride	A	A	A	A	A	Sodium hydroxide	C	C	C	C	C
Formic acid 85%	C	C	C	C	C	Sodium sulphate	A	A	A	A	A
Formaldehyde	A	A	A	A	A	Sodium sulphide	A	A	A	A	A
Freon 12	A	A	A	A	A	Starch	A	A	A	A	A
Freon 22	C	C	C	C	C	Steam	A	A	A	A	A
Gasoline (Leaded)	X	X	X	X	X	Stearic acid	A	A	A	A	A
Glycerine	A	A	A	A	A	Sugar	A	A	A	A	A
Heptane	A	A	A	A	A	Sulphuric acid 20%	X	X	X	C	X
Hydraulic oil	A	A	A	A	A	Sulphuric acid 96%	X	X	X	X	X
Hydraulic (glycol based)	A	A	A	A	A	Tar	A	A	A	A	A
Zinc hydrate	A	A	A	A	A	Tartaric acid	A	A	A	A	A
Hydrazine	A	A	A	A	C	Toluene	A	A	A	A	A
Hydrocloric acid 20%	C	C	C	C	C	Transformer oil	A	A	A	A	A
Hydrocloric acid 36%	X	X	X	X	X	Trichlorethylene	A	A	A	C	A
HCL (dry)	X	A	A	A	A	Water	A	A	A	A	A
Hydrofluoric acid 40%	X	X	X	X	X	White Spirit	A	A	A	A	A
Hydrogen	A	A	A	A	A	Xylene	C	C	C	C	C

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