Flexseals®

Asbestos free sealing sheets

ITALIAN SEALING SOLUTIONS

FMI is an Italian manufacturing company specialised in the processing of PTFE, graphite and all the main asbestos-free materials used for the production of gasketing materials gaskets and semi finished products of high technical value.

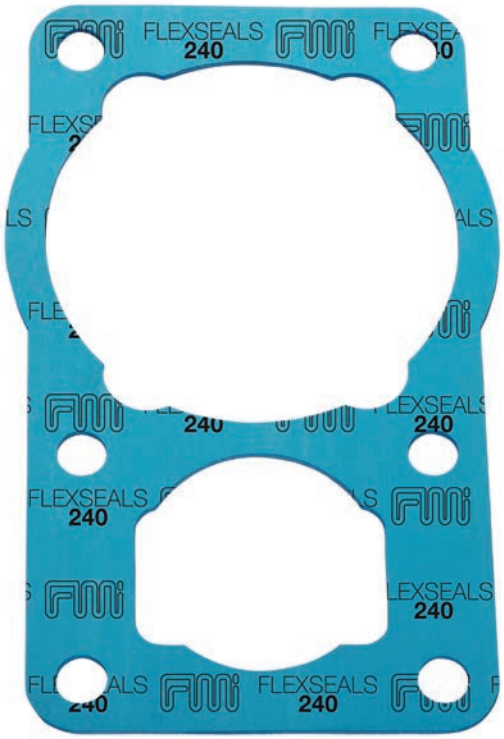
The company's current structure has resulted from progressive developments over the years which have led to the engineering of unique processing and manufacturing methods.

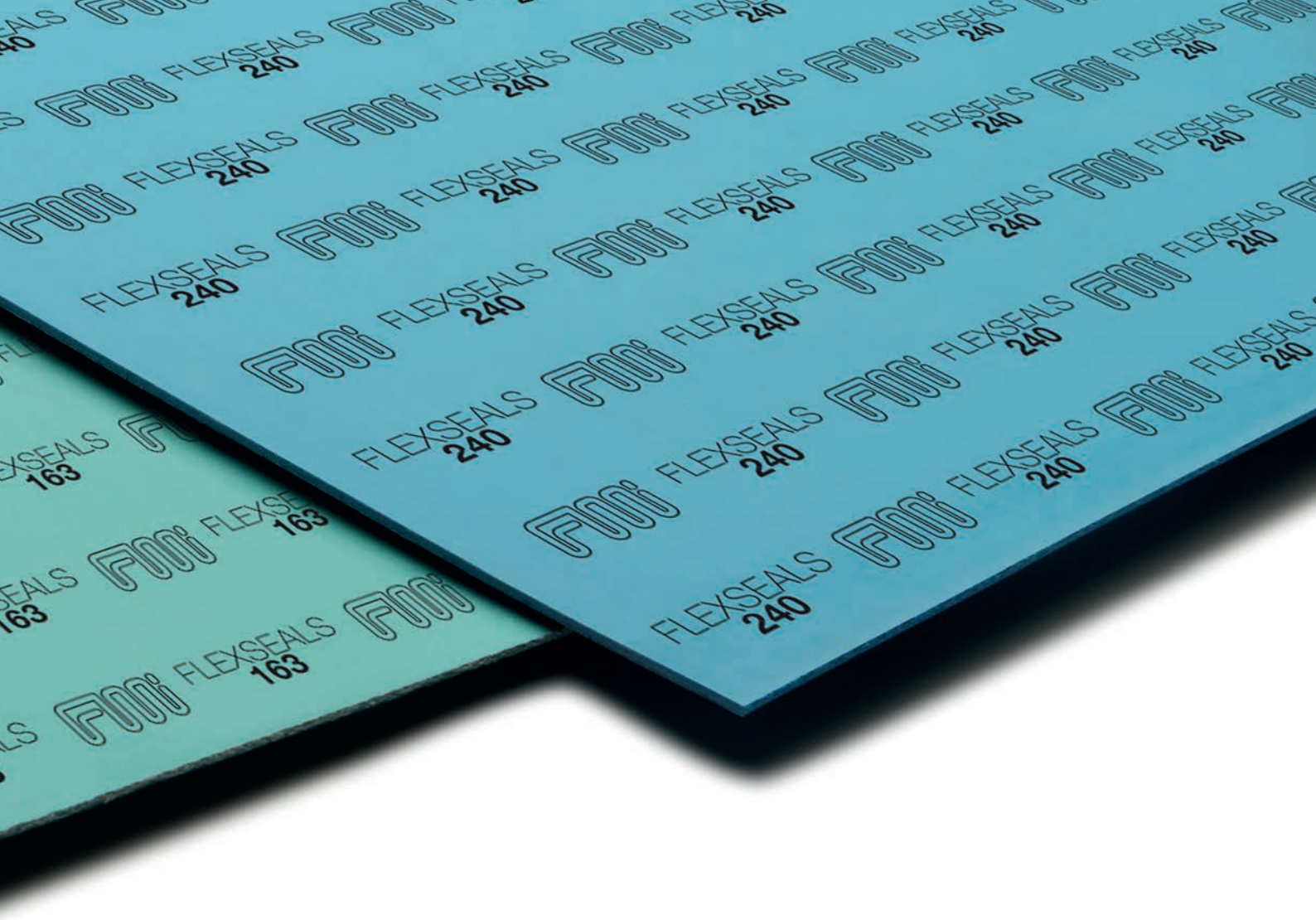
FMI manufactures leading-edge products and innovative solutions which are protected by international patents.

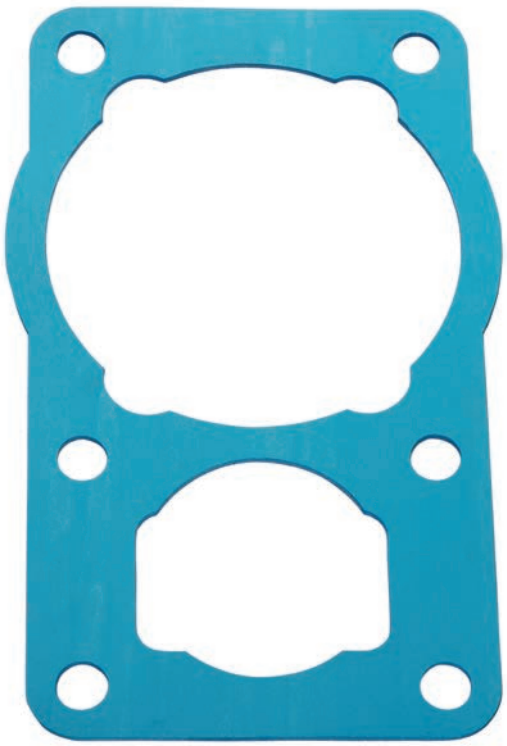
FMI's underlying goal is to provide the best quality, as certified by all major independent examination institutes.

Our products are our best guarantee suitable for all types of customers and applications, both standard and critical.

For a detailed list of the approvals, please visit our dedicated area on
www.fmi-spa.com/approvals





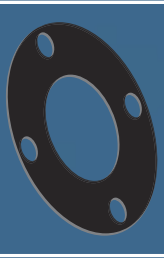


The Flexseals® range of products is manufactured from a mixture of organic fibres and rubber binders, which offer great versatility thanks to their highly flexible chemical and physical properties. Since different versions with different filler materials are available, seals are guaranteed to offer outstanding performance with the majority of chemicals and with most temperatures and operating pressures, also thanks to the use of internal reinforcements.

Flexseals® gasketing materials are available with fillers based on synthetic fibres, mineral fibres, aramid fibres and carbon fibres.

All products in this family are designed for maximum versatility and made from the finest materials, to ensure maximum reliability and durability, even in critical sealing applications.

Flexseals® compressed synthetic fibre jointing sheets

FLEXSEALS®	163	240	280
Colour			
Composition	Organic fibres with NBR/SBR binder	Organic fibres with NBR binder	Organic fibres with NBR binder
Density DIN 28090-2 (g/cm3)	1,7 - 2,1	1,6 - 1,9	1,7 - 2,0
Max working temperature continual (°C)	140	140	250
Max working temperature peak(°C)	210	350	400
Max operating pressure (MPa)	7	10	10
Leakage rate Din 3535-6 (mg*s-1*m-1)	0,1	0,1	0,06
Residual stress* 16h/175°C Din 52913 (MPa)	20	20	30
Compressibility ASTM F 36-J (%)	5 - 15	5 - 15	5 - 15
Recovery ASTM F 36-J (%) min.	50	50	50
ASTM OIL - IRM 903 5h/150°C max(%) ASTM F 146	10	5	3
ASTM FUEL B 5h/23°C max(%) ASTM F 146	15	5	5
Availability			
Sheets size (mm)	1.500x1.500 1.500X3.000	1.500x1.500 1.500X3.000	1.500x1.500 1.500X3.000
Thickness (mm)	0,5 to 5,0	0,5 to 5,0	0,5 to 5,0
Tolerances			
Sheets size (mm)	+/- 50	+/- 50	+/- 50
Thickness (%)	+/- 10	+/- 10	+/- 10

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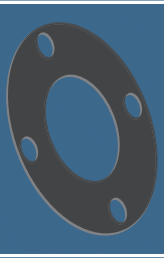
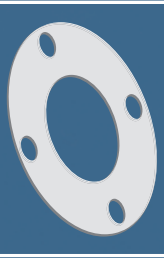
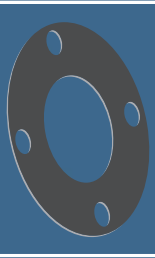
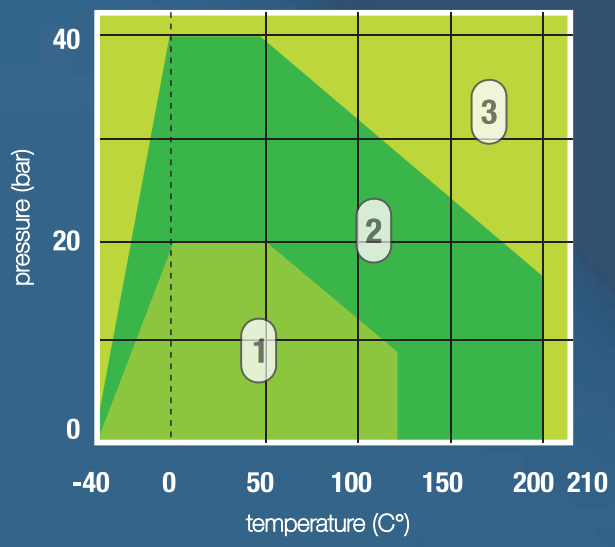
280 Metallic	330	500
		
Organic fibres with NBR binder and wire mesh insertion	High quality mineral and aramid fibres with NBR binder	Carbon fibres and high quality NBR binder
1,9 - 2,2	1,7 - 2,0	1,6 - 1,9
250	330	250
400	450	450
12	12	10
0,08	0,04	0,05
32	32	32
5 - 15	5 - 15	5 - 15
50	50	50
3	3	3
5	5	5
1.500x1.500 1.500X3.000 0,5 to 5,0	1.500x1.500 1.500X3.000 0,5 to 5,0	1.500x1.500 1.500X3.000 0,5 to 5,0
+/- 50 +/- 10	+/- 50 +/- 10	+/- 50 +/- 10

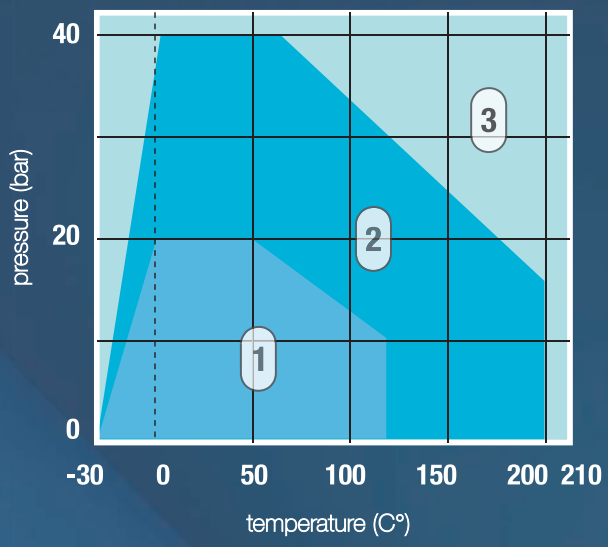
Other sheet sizes and thicknesses available upon request.
Maximum temperature and pressure values cannot be used simultaneously.
Typical parameters of 2 mm thickness jointing.
* Value valid for 1,5 thickness jointing.

TxP DIAGRAMS
2 mm thickness jointing

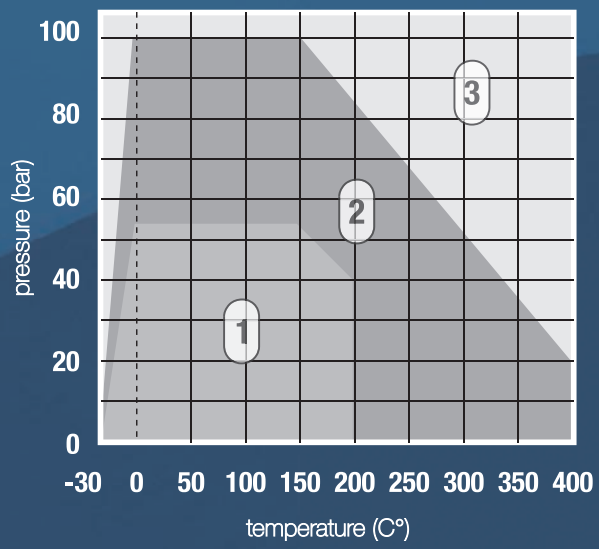
Flexseals® 163



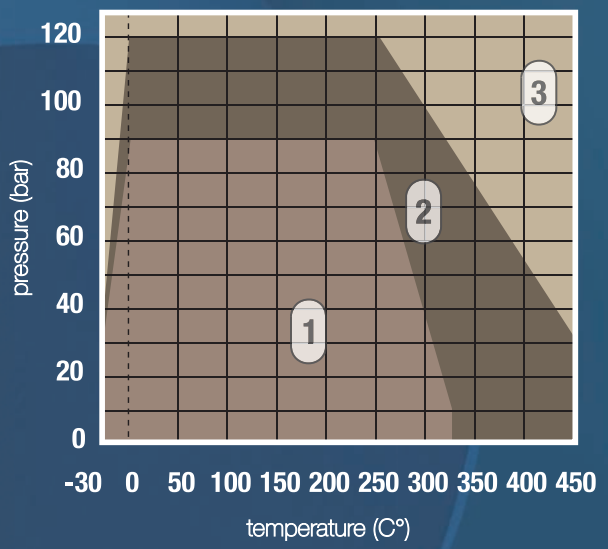
Flexseals® 240



Flexseals® 280



Flexseals® 330

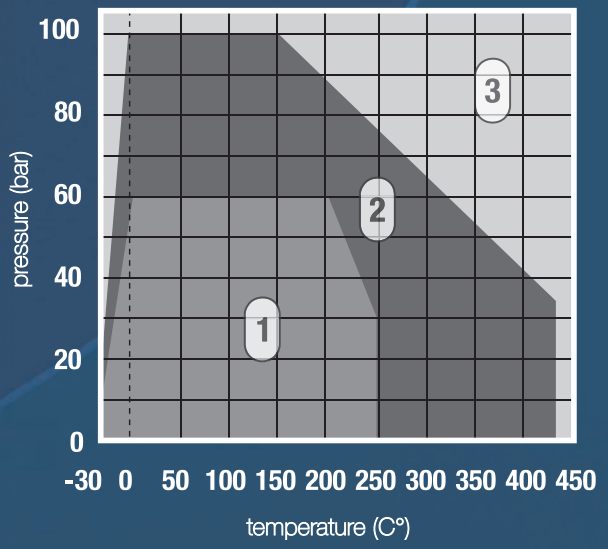


1 SUITABLE AREA

2 TECHNICAL ADVISE RECOMMENDED

3 TECHNICAL ADVISE MANDATORY

Flexseals® 500



All technical data is based on laboratory tests.
FMI spa reserves the right to modify the characteristics of its entire product range without obligation to anyone.

Chemical compatibility guide for Flexseals®

	FLEXSEALS® 163	FLEXSEALS® 240	FLEXSEALS® 280	FLEXSEALS® 330	FLEXSEALS® 500
Acetic acid 100%	●	●	●	●	●
Acetone	●	●	●	●	●
Acetylene	●	●	●	●	●
Air	●	●	●	●	●
Aluminium chloride	●	●	●	●	●
Ammonia	●	●	●	●	●
Ammonium hydrogenphospate	●	●	●	●	●
Barium chloride	●	●	●	●	●
Benzene	●	●	●	●	●
Boric acid	●	●	●	●	●
Calcium hydroxide	●	●	●	●	●
Carbon dioxide	●	●	●	●	●
Copper sulphate	●	●	●	●	●
Crude oil	●	●	●	●	●
Cyclohexanol	●	●	●	●	●
Cyklohexanon	●	●	●	●	●
Di-butyl phtalate	●	●	●	●	●
Ethyl ether	●	●	●	●	●
Ethylen	●	●	●	●	●
Ethylene glycol	●	●	●	●	●
Formic acid 10%	●	●	●	●	●
Glycerine	●	●	●	●	●
Hydraulic oil(mineral)	●	●	●	●	●
Hydrogen chloride dry	●	●	●	●	●
Hydrochlorid acid 20%	●	●	●	●	●
Chlorine dry	●	●	●	●	●
Chloroform	●	●	●	●	●
Iso-Octane	●	●	●	●	●
Kerosene	●	●	●	●	●
Methylene chloride	●	●	●	●	●
Natural gas	●	●	●	●	●
Nitric acid 20%	●	●	●	●	●
Nitrogen	●	●	●	●	●
Petrol	●	●	●	●	●
Petroleum	●	●	●	●	●
Phenol	●	●	●	●	●
Potable water	●	●	●	●	●
Potassium cyanide	●	●	●	●	●
Potassium iodide	●	●	●	●	●
Saturated steam	●	●	●	●	●
Silicon oil	●	●	●	●	●
Sodium carbonate	●	●	●	●	●
Sodium hydrogen carbonate	●	●	●	●	●
Sodium hydrogen sulphite	●	●	●	●	●
Sodium hydroxide	●	●	●	●	●
Sodium chloride	●	●	●	●	●
Sodium sulphate	●	●	●	●	●
Sugar	●	●	●	●	●
Sulphuric acid 65%	●	●	●	●	●
Tartaric acid	●	●	●	●	●
Tetrachlormethane	●	●	●	●	●
Toluene	●	●	●	●	●
Transformer oil	●	●	●	●	●
Turpentine	●	●	●	●	●
Xylene	●	●	●	●	●

● Suitable

● Unsuitable

● Depends on operating conditions

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