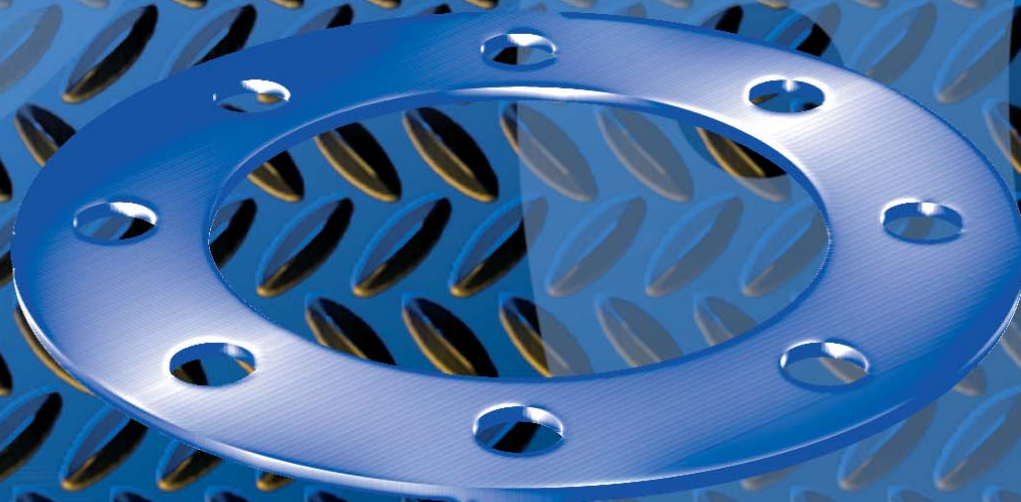


# COMPRESSED FIBER AND GRAPHITE SHEET

*Flexitallic*®





**Sheet Sizes:**

60" x 60", 60" x 120"  
Other sizes available on request.

**Thicknesses:**

1/64", 1/32", 0.040", 1/16", 0.080", 1/8"  
Other thicknesses available on request.

**Recommended Surface Finish:**

125 - 250 µin

**Antistick Coating:**

Standard on compressed fiber sheet

**Sheet materials recommended only for class 150 and 300# flanges.**

The data in this document relates to the material as supplied and should be used for guidance purposes only. The information herein is given in good faith but no liability will be accepted by the Company in relation to the same. The Company does not give any warranty that the product will be suitable for the use intended by the customer.

**Properties:**

		SF 1630	SF 2401	SF 2420	SF 3300
Thickness	in	1/32	1/16	1/32	1/32
Density <sup>(1)</sup>	lb/ft <sup>3</sup> (g/cc)	112 (1.8)	119 (1.9)	112 (1.8)	96 (1.54)
ASTM F36 Compressibility	%	12	8	7.5	11
ASTM F36 Recovery	%	52	59	52	65
ASTM F152 Cross Grain Tensile Strength <sup>(1)</sup>	psi (MPa)	870 (6)	1160 (8)	1910 (13)	2900 (20)
ASTM F38-B Creep Relaxation	%	-	27	14	16
ASTM F37-A Sealability (Fuel A 10 psi; Gskt Stress 1000 psi)	mL/hr	-	0.6	0.5	1.0
ASTM F146					
Thickness Increase IRM 903 @ 300°F	%	20	1	1.9	4
Thickness Increase Fuel B @ 70 - 85°F	%	11	10	1.3	6
Weight Increase IRM 903 @ 300°F	%	10	7	6.4	11
Weight Increase Fuel B @ 70 - 85°F	%	11	11	3.3	15
BS 7531 Nitrogen Gas Permeability <sup>(2)</sup>	mL/min	0.1	0.5	0.02	0.04

**Gasket Constants:**

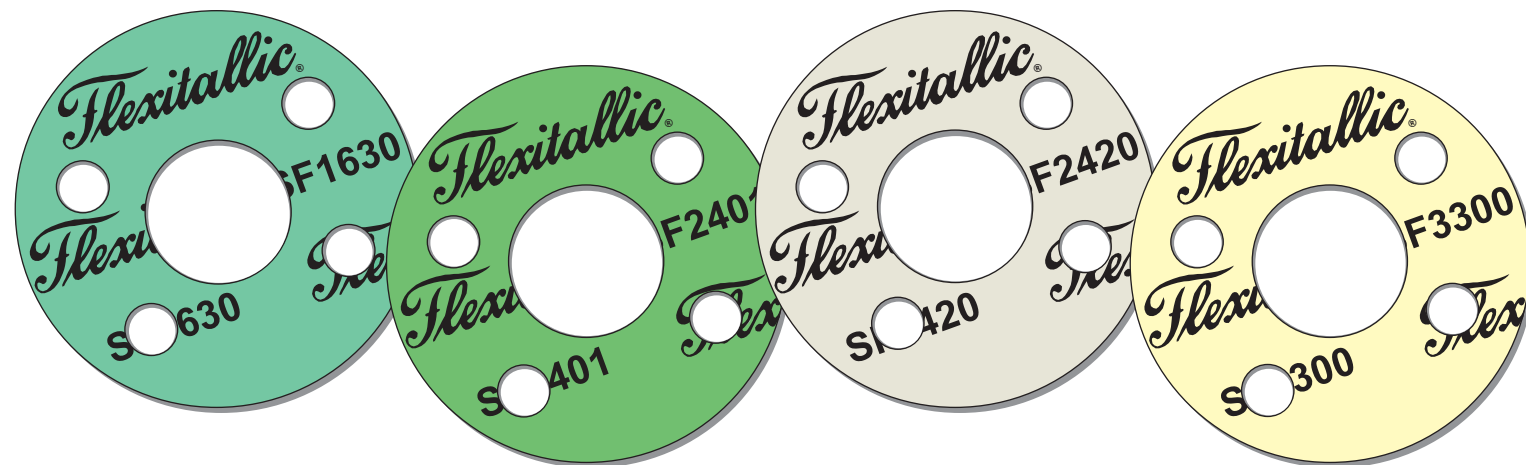
		SF 1630	SF 2401	SF 2420	SF 3300
ASME m		3.5	3.2	3.2	3.7
ASME Y	psi (MPa)	2610 (18)	2900 (20)	2900 (20)	3335 (23)
PVRC Gb <sup>(3)</sup>	psi (MPa)	-	-	-	2360 (16)
PVRC a <sup>(3)</sup>		-	-	-	0.19
PVRC Gs <sup>(3)</sup>	psi (MPa)	-	-	-	50 (0.34)

**Product Designation:**

ASTM F104 Line Callout	SF 1630	SF 2401	SF 2420	SF 3300
	712230E3E5M5	711120E1E3M4	0711110M5	712120E32M7

**Service Parameters:**

		SF 1630	SF 2401	SF 2420	SF 3300
pH Range		4 - 10	3 - 11	3 - 11	3 - 11
Maximum Temperature <sup>(4)</sup> (@ minimum thickness)	°F (°C)	356 (180)	662 (350)	752 (400)	824 (440)
Maximum Pressure <sup>(4)</sup>	psi (bar)	1015 (70)	1450 (100)	1450 (100)	2030 (140)
Temperature-Pressure Limitations	°F vs. psi				



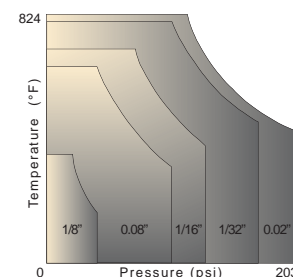
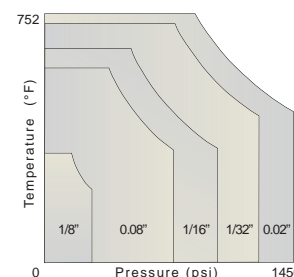
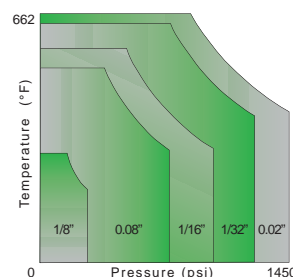
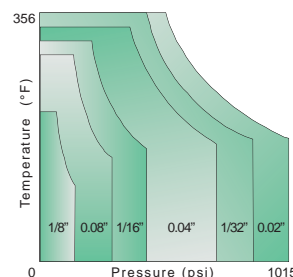
Material: Description:	SF 1630 Cellulose, Aramid, NBR, NR	SF 2401 Synthetic, NBR	SF 2420 Synthetic, SBR	SF 3300 Aramid, Glass, NBR
Service & Application:	<ul style="list-style-type: none"> <li>• Ideal for hydrotesting</li> <li>• Low temperature, non-critical applications</li> <li>• Suitable for sealing water and mild chemicals</li> </ul>	<ul style="list-style-type: none"> <li>• General service</li> <li>• Suitable for sealing steam, water, gases, oils, mild solvents and/or alkalis</li> </ul>	<ul style="list-style-type: none"> <li>• SBR bound general service sheet</li> <li>• Suitable for sealing a wide range of chemicals</li> </ul>	<ul style="list-style-type: none"> <li>• Top grade general service sheet</li> <li>• Superior performance sealing a wide range of chemicals</li> </ul>

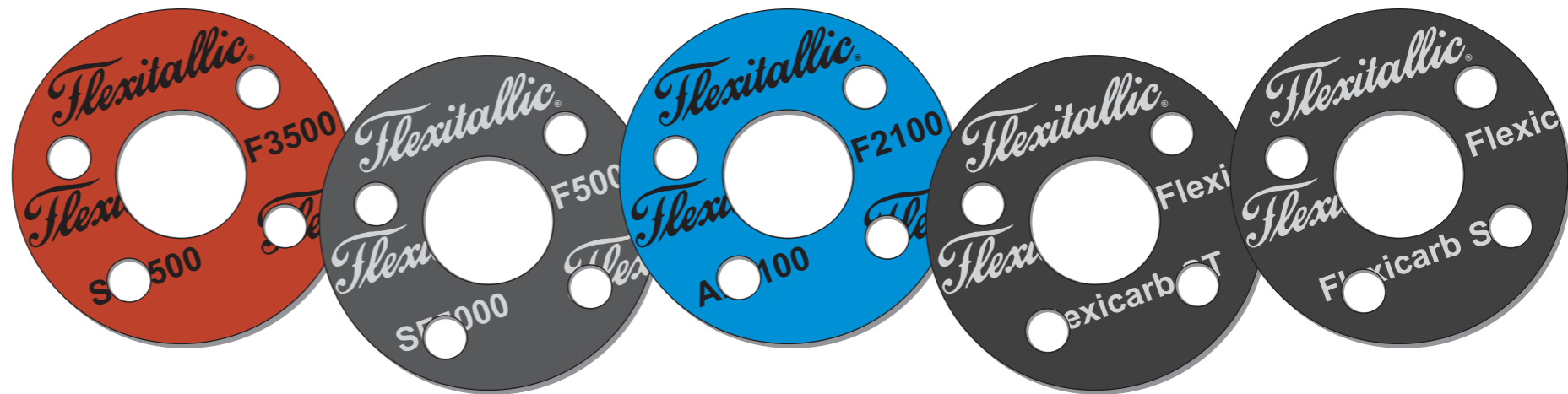
<sup>(1)</sup> Flexicarb values for facing material only

<sup>(2)</sup> DIN 3535 for Flexicarb<sup>®</sup> ST and SR

<sup>(3)</sup> 1/16" for SF 3300 and AF 2100

<sup>(4)</sup> Maximum temp/pressure combinations cannot be used simultaneously.





Material: Description:	SF 3500 Aramid, Glass, NBR	SF 5000 Carbon, Aramid, NBR	AF 2100 Glass, NBR	Flexicarb® ST Graphite, Tanged 316SS Core	Flexicarb® SR Graphite, Flat 316SS Core
<b>Service &amp; Application:</b>	<ul style="list-style-type: none"> <li>Increased strength</li> <li>Ideal for use in pumps, especially split casing</li> <li>Excellent load bearing capability</li> </ul>	<ul style="list-style-type: none"> <li>Especially suitable for sealing caustic liquors and other strong alkalis</li> </ul>	<ul style="list-style-type: none"> <li>Unique sheet with higher compressibility and higher service temperature capability</li> <li>General chemical service</li> </ul>	<ul style="list-style-type: none"> <li>Excellent sealing performance</li> <li>Excellent range of chemical and temperature resistance</li> </ul> <p>Note: Susceptible to oxidation</p>	<ul style="list-style-type: none"> <li>Excellent sealing performance</li> <li>Excellent range of chemical and temperature resistance</li> </ul> <p>Note: Susceptible to oxidation</p>

Thickness	in	1/64	1/32	1/32	1/16	1/16
Density <sup>(1)</sup>	lb/ft <sup>3</sup> (g/cc)	100 (1.6)	100 (1.6)	100 (1.6)	70 (1.1)	70 (1.1)
ASTM F36 Compressibility	%	10	7.5	18	38	40
ASTM F36 Recovery	%	62	64	68	16	16
ASTM F152 Cross Grain Tensile Strength <sup>(1)</sup>	psi (MPa)	3335 (23)	2625 (18)	1740 (12)	650 (4.5)	650 (4.5)
ASTM F38-B Creep Relaxation	%	-	22	16	<5	<5
ASTM F37-A Sealability (Fuel A 10 psi; Gskt Stress 1000 psi)	mL/hr	-	0.9	0.4	<0.5	<0.5
ASTM F146						
Thickness Increase IRM 903 @ 300°F	%	4	3	5	-	-
Thickness Increase Fuel B @ 70 - 85°F	%	7	5	10	-	-
Weight Increase IRM 903 @ 300°F	%	-	10	18	-	-
Weight Increase Fuel B @ 70 - 85°F	%	-	12	19	-	-
BS 7531 Nitrogen Gas Permeability <sup>(2)</sup>	mL/min	0.01	0.05	0.03	3.1	1.5
<b>Gasket Constants:</b>						
ASME m		3.7	3.7	3.7	2	2
ASME Y	psi (MPa)	3335 (23)	3335 (23)	3335 (23)	2500 (17)	900 (6)
PVRC Gb <sup>(3)</sup>	psi (MPa)	-	-	1770 (12)	1400 (9.7)	816 (5.6)
PVRC a <sup>(3)</sup>		-	-	0.22	0.32	0.38
PVRC Gs <sup>(3)</sup>	psi (MPa)	-	-	65 (0.45)	0.01 (0.00007)	0.07 (0.0005)
<b>Product Designation:</b>						
ASTM F104 Line Callout		712120E32M7	712120M6	F713140M5	-	-
<b>Service Parameters:</b>						
pH Range		3 - 11	3 - 14	3 - 11	0 - 14	0 - 14
Maximum Temperature <sup>(4)</sup> (@ minimum thickness)	°F (°C)	824 (440)	824 (440)	887 (475)	842 (450)	842 (450)
Maximum Pressure <sup>(4)</sup>	psi (bar)	3000 (207)	2030 (140)	2030 (140)	+ 2000 (140)	+ 2000 (140)
Temperature-Pressure Limitations	°F vs. psi				-	-

<sup>(1)</sup> Flexicarb values for facing material only  
<sup>(2)</sup> DIN 3535 for Flexicarb® ST and SR  
<sup>(3)</sup> 1/16" for SF 3300 and AF 2100  
<sup>(4)</sup> Maximum temp/pressure combinations cannot be used simultaneously.

