

Technical Data Sheet

Gore GR (WCMGR)

Exceptionally resistant to creep, cold flow and aggressive media, this 100 % ePTFE gasket sheet reliably seals steel piping and equipment.

Technical Specifications

Material: 100 % expanded PTFE (polytetrafluoroethylene), with multidirectional strength.

Operating Range: The maximum applicable pressure and temperature depend mainly on the equipment and installation.

Typical use: -60°C to 230°C (-76°F to 446°F); industrial full vacuum 1 to 40 bar(580 psi)

Maximum use: -269°C to 315°C (-452°F to 600°F); full vacuum to 210 bar(3000psi)

For applications outside the typical use range, Gore recommends an application specific engineering design calculation and extra care during installation. Also, consider retorquing after a thermal cycle when the equipment has returned to an ambient temperature condition. Please contact us if further guidance is required.

Chemical Resistance: Chemical resistance to all media pH 0–14, except molten alkali metals and elemental fluorine.

Shelf Life: ePTFE is not subject to ageing and can be stored indefinitely.

Product Sizes

GORE® GR Sheet Gasketing is available in 1524 mm x 1524 mm (60" x 60") sheet. Standard thicknesses range from 1 mm (1/32") up to 6.0 mm (1/4"). For applications where ink is not acceptable, embossed sheet is available.

1 absolute pressure of 1 mmHg(Torr) = 133 Pa = 1.33 mbar = 0.019 psi

Technical Information

Sealability of bolted flange connections is dependent on a number of variables, including those associated with the flange, bolt, gasket, and specific application operating conditions.

Gasket Design Factors:

EN13555 provides the test method for generating the gasket parameters used in EN1591-1 calculations. The resulting gasket parameters (Q_{min} , Q_{Smin} , Q_{Smax} , P_{QR} , E_G) are dependent on the selected test conditions. Users should select the values that best match their application. For complete EN13555 data, please visit our website www.gore.com/sealants.

m & y are gasket constants used for flange design as specified in the ASME Boiler and Pressure Vessel Research Code Division

1 Section VIII Appendix 2. See the table below for results.

AD 2000 B 7 gasket parameters are available on our website www.gore.com/sealants.

Certifications & Application Information

TA Luft, Oxygen Service (BAM), Chlorine Service, Marine & Offshore Applications (ABS), Leachable Fluoride and Chloride, Blowout VDI2200, ISO 9001.

Further information, including certificates, torque tables, safety information, is available on our website www.gore.com/sealants.



PTFE



Certificate Number: 14352
ISO 9001



Care should be taken in selecting the most suitable quality for each application. Advice is available, but final responsibility remains with the customer.

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Gore GR Sheet Gasketing

PTFE

	Thickness			Test Conditions		
	1.5 mm (1/16")	3.0 mm (1/8")	6.0 mm (1/4")	Gasket Stress	Temperature	Pressure
Sealability						
Q _{min} (L _{0.1})	19 MPa (2,760 psi)	24 MPa (3,480 psi)	29 MPa (4,205 psi)	Variable ³	Room	40 bar (580 psi)
Q _{min} (L _{0.01})	32 MPa (4,640 psi)	37 MPa (5,365 psi)	41 MPa (5,950 psi)			
Q _{min} ¹	10 MPa (1,450 psi)	10 MPa (1,450 psi)	10 MPa (1,450 psi)			
m & y	2.5 & 19.3 MPa (2,800 psi)			Variable ³	Room	Variable ³
ASTM F37-95	0.3 ml/h ⁴			20.7 MPa (3,000 psi)	Room	2 bar (30 psi)
ARLA	Before After	1.04E-04 mg/s 1.42E-05 mg/s	1.04E-03 mg/s < 1.0E-7 mg/s	34.5 MPa (5,000 psi)	315 °C (600 °F)	55 bar (800 psi)
ROTT	Gb a Gs	685 psi 0.271 6.19E-02 psi	770 psi 0.274 9.38E-07 psi	Variable ⁵	Room	Variable ⁵
Relaxation						
P _{GR} ²		0.90	0.85	0.79	20 MPa (2,900 psi)	Room
		0.94	0.90	0.84	30 MPa (4,350 psi)	
		0.98	0.95	0.90	50 MPa (7,250 psi)	
		0.61	0.47	0.39	20 MPa (2,900 psi)	150 °C (302 °F)
		0.87	0.73	0.58	30 MPa (4,350 psi)	
		0.96	0.78	0.62	50 MPa (7,250 psi)	230 °C (446 °F)
		0.58	0.37	0.25	20 MPa (2,900 psi)	
		0.89	0.75	0.52	30 MPa (4,350 psi)	
	0.86	0.65	0.51	50 MPa (7,250 psi)		
ASTM F38-95		23 % ⁶		20.7 MPa (3,000 psi)	100 °C (212 °F)	
ARLA	31 %	43 %		34.5 MPa (5,000 psi)	315 °C (600 °F)	
Crush Strength						
Q _{max} ²	230 MPa (33,360 psi)	230 MPa (33,360 psi)	160 MPa (23,205 psi)		Room	
ROTT	276 MPa (40,030 psi)	276 MPa (40,030 psi)			Room	
Compressibility						
ASTM F36-99		56 % ⁴		17.2 MPa (2,500 psi)	Room	
Recovery						
ASTM F36-99		8 % ⁴		17.2 MPa (2,500 psi)	Room	
Blowout						
VDI 2200 (06-2007)		Pass Step 1 ⁷ Pass Step 2 ⁷		30 MPa (4,350 psi)	230 °C (446 °F)	50 bar (725 psi)
HOBT with Cycling		Trial Gasket Temperature 315 °C (600 °F) ⁷		34.5 MPa (5,000 psi)		30 bar (435 psi)

1 up to L_{0.001} and Q₁ > 40 MPa

2 Tested per EN 13555

3 Tested per Standard Practice ASTM F-3149-15

4 Tested thickness 1.5 mm (1/16")

5 Tested per ROTT Draft 9 Soft Gasket Test Procedure

6 Tested thickness 0.8 mm (0.03")

7 Tested thickness 3.0 mm (1/8")

For Industrial use only. Not for use in food, drug, cosmetic or medical device manufacturing, processing or packaging operations.



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