GORE® GR Sheet Gasketing

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

Technical Specifications

Material
100% ePTFE (expanded 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 (3000 psi).

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 Gore 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 aging and can be stored indefinitely.

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 and safety information, is available on gore.com/sealants.

Product Sizes

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

Thickness	1.0 mm (1/32")	1.5 mm (1/16")	3.0 mm (1/8")	6.0 mm (1/4")
Printed Sheet	✓	✓	✓	✓
Embossed Sheet		✓	✓	✓

Technical Information

Gasket design factors
The sealability of a bolted flange connection depends upon a number of variables associated with the flange, bolt, gasket, and application-specific operating conditions.

EN 13555 provides the test method for generating the gasket parameters used in EN 1591-1 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 EN 13555 data, please visit 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 on the next page for results.

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

[1] Absolute pressure of 1 mmHg (Torr) = 133 Pa = 1.33 mbar = 0.019 psi

Technical Data: GORE® GR Sheet Gasketing

		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} ($L_{0.1}$) Q_{min} ($L_{0.01}$) Q_{Smin} [2]		19 MPa (2,760 psi) 32 MPa (4,640 psi) 10 MPa (1,450 psi)	24 MPa (3,480 psi) 37 MPa (5,365 psi) 10 MPa (1,450 psi)	29 MPa (4,205 psi) 41 MPa (5,950 psi) 10 MPa (1,450 psi)	Variable [3]	Room	40 bar (580 psi)
m & y		2.5 & 19.3 MPa (2,800 psi)			Variable [4]	Room	Variable [4]
ASTM F37-95		0.3 ml/h [5]			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 [6]	Room	Variable [6]
Relaxation							
P_{QR} [3]		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)		
		0.58	0.37	0.25	20 MPa (2,900 psi)	230 °C (446 °F)	–
		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% [7]			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_{Smax} [3]		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% [5]			17.2 MPa (2,500 psi)	Room	–
Recovery							
ASTM F36-99		8% [5]			17.2 MPa (2,500 psi)	Room	–
Blowout							
VDI 2200 (06-2007)		Pass Step 1 [8] / Pass Step 2 [8]			30 MPa (4,350 psi)	230 °C (446 °F)	50 bar (725 psi)
HOBT with cycling		Trial gasket temperature 315 °C (600 °F) [8]			34.5 MPa (5,000 psi)	–	30 bar (435 psi)

[2] Up to $L_{0.001}$ and Q_A > 40 MPa
[3] Tested per EN 13555
[4] Tested per Standard Practice ASTM F-3149-15
[5] Tested thickness 1.5 mm (1/16")
[6] Tested per ROTT Draft 9 Soft Gasket Test Procedure
[7] Tested thickness 0.8 mm (0.03")
[8] Tested thickness 3.0 mm (1/8")

PLEASE VISIT GORE.COM/SEALANTS TO FIND CONTACT DETAILS FOR ALL LOCAL SALES OFFICES.

North America / South America
W. L. Gore & Associates, Inc. (USA)
T +1 800 654 4229
F +1 410 506 8585
E sealants@wlgore.com

Europe / Middle East / Russia / Africa
W. L. Gore & Associates GmbH (Germany)
T +49 89 4612 2215
F +49 89 4612 43780
E sealants_EU@wlgore.com

Asia / Australia
W. L. Gore & Associates Technologies (Shenzhen) Co., Ltd. Shanghai Branch
T +86 21 5172 8299
F +86 21 6247 9199
E sealants_AP@wlgore.com

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