GORE® Sealant Technologies
Data Sheet



GORE® Universal Pipe Gasket (Style 800)

Reliably seal a broad range of flange materials with this low stress-to-seal, exceptionally dimensionally-stable and chemically-resistant 100% ePTFE gasket.

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 (3,000 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.

Food Contact
Unprinted version is suitable for food contact applications.*

Product Sizes

GORE® Universal Pipe Gasket (Style 800) is available in ring or full-face styles, manufactured to ASME and EN standards. For dimensions, use QR codes on page 2. For other sizes, contact Gore.

Gasket standard & options	Gasket style	Pressure class	Product Sizing 1.5 mm (1/16")	3.0 mm (1/8")	6.0 mm (1/4")
ASME B16.21 Ⓐ	Ring	CL 150	NPS 1/2–24	NPS 1/2–24	–
		CL 300			
	Full Face	CL 150			NPS 1/2–24
		CL 300			
ASME B16.21 GLS ID Ⓑ	Ring	CL 150	–	–	NPS 1/2–24
		CL 300			
ASME B16.21 NPS ID Ⓒ	Ring	CL 150	NPS 1/2–12	NPS 1/2–12	NPS 1/2–12
		CL 300			
	Full Face	CL 150			
		CL 300			
EN 1514-1 Ⓐ	Ring (IBC)	PN 2.5	DN 10–600	DN 10–600	–
		PN 6			
		PN 10			
		PN 16			
		PN 25			
		PN 40			
EN 1514-1 GLS ID Ⓑ	Ring (IBC)	PN 10	–	–	DN 15–600

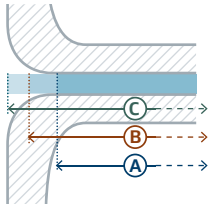
[1] Absolute pressure of 1 mmHg (Torr) = 133 Pa = 1.33 mbar = 0.019 psi

Inner diameter options for GORE® Universal Pipe Gasket (Style 800)

Ⓐ **Standard ID:**
for ASME B16.21 and EN 1514-1
- For general use in steel flanges
- ID per applicable standard

Ⓑ **GLS ID Option:**
for ASME B16.21 and EN 1514-1
- Best option for glass-lined steel flanges
- ID reduced to protect glass lining

Ⓒ **NPS ID Option:**
for ASME B16.21
- Required for ductile iron pipe and other specialty applications
- ID = Nominal Pipe Size in inches ("old standard")



Together, improving life

Technical Information

Stress-to-seal

The sealability of a bolted flange connection depends upon a number of variables associated with the flange, bolt, gasket, and application-specific operating conditions. In recognition of this complexity, Gore offers straightforward guidance on minimum stress-to-seal values, based on our field experience and internal testing. Please contact Gore for assistance when considering GORE® Universal Pipe Gasket (Style 800) for your specific application.

	Flange material		
	Glass-lined steel	FRP	Steel
Stress-to-seal			
Recommended	20 MPa (2,900 psi)	10 MPa (1,450 psi)	20 MPa (2,900 psi)
Minimum recommended	10 MPa (1,450 psi)	5 MPa (725 psi)	10 MPa (1,450 psi)
Typical application conditions			
Temperature up to	230 °C (446 °F)	100 °C (212 °F)	230 °C (446 °F)
Pressure up to	10 bar (145 psi)	16 bar (232 psi)	40 bar (580 psi)
Typical thickness	6.0 mm (1/4")	3.0 mm (1/8")	1.5 mm or 3.0 mm (1/16" or 1/8")

Gasket design factors

- 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.



Certifications & Application Information

Oxygen Service (BAM), Chlorine Service, Blowout VDI 2200, Marine & Offshore applications (ABS), Leachable Fluoride and Chloride, ISO 9001 and Food Contact.

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

Further Information: GORE® Universal Pipe Gasket (Style 800)

Find more relevant info in our product flyer:

Product Flyer
→PDF

Find product dimensions for your standard:

ASME standard
→PDF

EN standard
→PDF

Technical Data

		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]		6 MPa (870 psi) 8 MPa (1,160 psi) 5 MPa (725 psi)	5 MPa (725 psi) 8 MPa (1,160 psi) 6 MPa (870 psi)	5 MPa (725 psi) 8 MPa (1,160 psi) 8 MPa (1,160 psi)	Variable [3]	Room	40 bar (580 psi)
m & y		2.4 & 10.3 MPa (1,500 psi) for steel material [5] 1.4 & 5 MPa (725 psi) for glass-lined steel material [6, 7]			Variable [4]	Room	Variable [4]
ASTM F37-95		0.48 ml/h [8]			6.9 MPa (1,000 psi)	Room	0.5 bar (7 psi)
ARLA	Before After	2.86E-05 mg/s < 1E-07 mg/s	1.29E-04 mg/s < 1E-07 mg/s	–	34.5 MPa (5,000 psi)	315 °C (600 °F)	55 bar (800 psi)
ROTT	Gb a Gs	441 psi 0.3 8.55E-01 psi	155 psi 0.411 5.41E-02 psi	–	Variable [9]	Room	Variable [9]
Relaxation							
P_{QR} [3]		0.84	0.77	0.75	10 MPa (1,450 psi)	Room	–
		0.92	0.86	0.79	20 MPa (2,900 psi)		
		0.96	0.92	0.85	30 MPa (4,350 psi)		
		0.59	0.44	0.38	10 MPa (1,450 psi)	150 °C (302 °F)	–
		0.76	0.59	0.42	20 MPa (2,900 psi)		
		0.90	0.79	0.61	30 MPa (4,350 psi)		
		0.46	0.36	0.29	10 MPa (1,450 psi)	230 °C (446 °F)	–
		0.78	0.49	0.39	20 MPa (2,900 psi)		
		0.81	0.69	0.55	30 MPa (4,350 psi)		
ASTM F38-95		11% [8]			20.7 MPa (3,000 psi)	100 °C (212 °F)	–
ARLA		23%	52%	–	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)	200 MPa (29,010 psi)	–	23 °C (73 °F)	–
ROTT		276 MPa (40,031 psi)	250 MPa (36,260 psi)	–	–	Room	–
Compressibility							
ASTM F36-95		55% [10]			17.2 MPa (2,500 psi)	Room	–
Recovery							
ASTM F36-95		16% [10]			17.2 MPa (2,500 psi)	Room	–
Blowout							
VDI 2200 (06-2007)		Pass Test Step 1 [6] Pass Test Step 2 [6]			30 MPa (4,350 psi)	230 °C (446 °F)	60 bar (870 psi)
HOBT with cycling		Trial gasket temperature 315 °C (600 °F) [6]			34.5 MPa (5,000 psi)	–	30 bar (435 psi)

[2] Up to $L_{0.01}$ and $Q_A \geq 20$ MPa
[3] Tested per EN 13555
[4] Tested per CETIM, reference report no.74630/6J1/a
[5] Internal pressure up to 40 bar (580 psi) & T3 seal
[6] Tested thickness 3.0 mm (1/8")
[7] Internal pressure up to 10 bar (145 psi) & T3 seal
[8] Tested thickness 0.8 mm (0.031")
[9] Tested per ROTT Draft 9 Soft Gasket Test Procedure
[10] Tested thickness 1.14 mm (0.045")

***Unprinted GORE® Universal Pipe Gasket (Style 800) meets the requirements for repeat-use food contact applications with all food types per FDA regulations 21CFR174.5 (d) (1-5), 21CFR177.1550 (and 21 CFR175.300 for products with red and green printing ink). Declaration of Compliance is available upon request.**

All technical information and advice given here is based on Gore's previous experiences and/or test results. Gore gives this information to the best of its knowledge, but assumes no legal responsibility. Customers are asked to check the suitability and usability in the specific application, since the performance of the product can only be judged when all necessary operating data are available. The above information is subject to change and is not to be used for specification purposes. Gore's terms and conditions of sale apply to the sale of the products by Gore.

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SEAL-234-R7-DSH-EN-SEP26