



GORE® Joint Sealant

Versatile and easy-to-install 100% ePTFE sealing cord for large steel flanges in general-use applications.

Technical Specifications

Material

100% ePTFE (expanded polytetrafluoroethylene), with monodirectional strength. This product is supplied with an adhesive backer only to aid in the product installation.

Operating range

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

Typical use: –60 °C to 150 °C (–76 °F to 300 °F); industrial full vacuum¹ to 10 bar (145 psi). For higher pressures, contact Gore.

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. To ensure optimal adhesive function, we recommend use within two years of date of purchase when stored under normal² conditions.

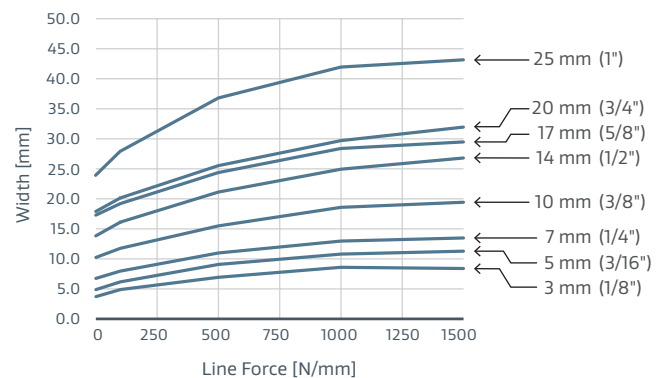
¹ Absolute pressure of 1 mmHg (Torr) = 133 Pa = 1.33 mbar = 0.019 psi
² 21 °C (70 °F) 50% relative humidity

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. EN 13555 specifies a test flange that is DN 40 / PN 40 in size; therefore, GORE® Joint Sealant in 5 mm width was tested using a stiffness of 500 kN/mm. Results for all other sizes (see the table on the back) were extrapolated from these results using the following compression curve. 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.

Technical Data: GORE® Joint Sealant

		Width	Test conditions		
		5 mm (3/16")	Gasket Stress	Temperature	Pressure
Sealability					
m & y		1.5 & 17.0 MPa (2,500 psi)	Variable ⁴	Room	Variable ³
Relaxation					
P _{QR}		0.62	10 MPa (1,450 psi)	Room	–
		0.75	30 MPa (4,350 psi)		
		0.22	10 MPa (1,450 psi)	80 °C (212 °F)	–
		0.47	30 MPa (4,350 psi)		
		0.12	10 MPa (1,450 psi)	150 °C (302 °F)	–
		0.30	30 MPa (4,350 psi)		
Crush strength					
Q _{Smax} ⁴		200 MPa (29,000 psi)	–	Room	–
Blowout					
VDI 2200 (06-2007)		Pass Step 1 / Pass Step 2	30 MPa (4,350 psi)	150 °C (302 °F)	60 bar (870 psi)

Due to the material properties of monoaxially expanded PTFE, the increase in the gasket width of GORE® Joint Sealant depends on the pressure exerted on it. For the configuration of flange connections, it is therefore easier to use line forces instead of gasket stress. The line force, Q*, is the ratio of the force per unit length.

Width	Sealability			Test conditions		
	Q* _{min} (L _{0.1}) ⁵	Q* _{min} (L _{0.01}) ⁵	Q* _{Smin} ^{5,6}	Gasket Stress	Temperature	Pressure
3 mm (1/8")	65 N/mm	97 N/mm	37 N/mm	Variable ⁴	Room	10 bar (145 psi)
5 mm (3/16")	90 N/mm	140 N/mm	50 N/mm			
7 mm (1/4")	119 N/mm	183 N/mm	68 N/mm			
10 mm (3/8")	183 N/mm	286 N/mm	104 N/mm			
14 mm (1/2")	261 N/mm	411 N/mm	146 N/mm			
17 mm (5/8")	315 N/mm	506 N/mm	179 N/mm			
20 mm (3/4")	344 N/mm	546 N/mm	196 N/mm			
25 mm (1")	513 N/mm	832 N/mm	276 N/mm			

Product Sizes

GORE® Joint Sealant is available in all listed sizes and multiple spool lengths. Parts are manufactured to metric dimensions.

Nominal size	3 mm (1/8")	5 mm (3/16")	7 mm (1/4")	10 mm (3/8")	14 mm (1/2")	17 mm (5/8")	20 mm (3/4")	25 mm (1")

GORE® Joint Sealant is very conformable. Prior to compression its dimensions are easily changed during storage and handling. Minor variation of dimensions in the uncompressed state have no influence on product performance.

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Certifications & Application Information

Blowout (VDI 2200), Oxygen Service (BAM), Leachable Fluoride and Chloride, Natural Gas Service (DVGW Type Examination), ISO 9001.

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

³ Tested per Standard Practice ASTM F-3149-15

⁴ Tested per EN 13555

⁵ EN 13555 specifies a test flange that is DN 40/PN 40 in size; therefore, GORE® Joint Sealant in 5 mm width was tested using a stiffness of 500 kN/mm. Results for all other sizes were extrapolated from these results. For more details please visit gore.com/sealants.

⁶ up to Q_A < 80 MPa

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

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