GORE® Joint Sealant

Datasheet

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

Technical Specifications

Material: 100 % expanded PTFE (polytetrafluoroethylene), with monodirectional strength. This product is supplied with an adhesive backer only to aide 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 vacuum [1] to 10 bar (145 psi). For higher pressures, contact Gore.

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 normal [2] conditions.

Product Sizes

GORE® Joint Sealant	
Nominal Size [3]	**Standard Lengths**
3 mm (1/8")	GORE® Joint Sealant is available in multiple sizes and spool length combinations. All parts manufactured to metric dimensions.
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")	

Also available in selected dimensions of rectangular cross-section cord, and thin and wider rectangular cross-section tape. Please contact Gore to help identify the suitable product from a range of available options.

1 Absolute pressure of 1 mmHg(Torr) = 133 Pa = 1.33 mbar = 0.019 psi
2 21 °C (70 °F) 50 % Relative Humidity
3 GORE® Joint Sealant is very conformable. Therefore 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.

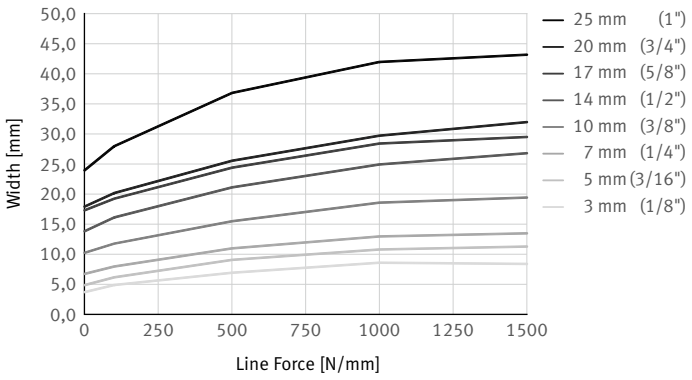
Technical Information

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:

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.

GORE® Joint Sealant – Compression Curves at Room Temperature



For complete EN 13555 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 on the back side for results.

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

Certifications & Application Information

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

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

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 [1]	Room	Variable [1]
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} [2]	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} ($L_{0.1}$) [3]	Q^*_{min} ($L_{0.01}$) [3]	Q^*_{smin} [3,4]	Gasket Stress	Temperature	Pressure
3 mm (1/8")	65 N/mm	97 N/mm	37 N/mm	Variable [2]	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			

1 Tested per Standard Practice ASTM F-3149-15
2 Tested per EN 13555
3 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.
4 up to Q_A < 80 MPa

FOR INDUSTRIAL USE ONLY. Not for use in food, drug, cosmetic or medical device manufacturing, processing, or packaging operations.

Supplied by

For detailed selection criteria, technical information, installation guideline and a complete listing of local sales offices please visit ***gore.com/sealants***

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