



GR Sheet Gasketing

Datasheet

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 vacuum¹ 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.

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.

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

Other sheet thicknesses may be available upon request.

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. 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 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, 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.

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



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| | 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 ² | 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 _{Smin} 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 G _b a G _s | 685 psi 0.271 6.19E-02 psi | 770 psi 0.274 9.38E-07 psi | | Variable ⁵ | Room | Variable ⁵ |
| Relaxation | | | | | | |
| P _{QR} 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) | | |
| | 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 % 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 _{Smax} 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 Q_a > 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.

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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