



GORE™ Joint Sealant DF



Technical bulletin – EN 13555 tests: E_G (Recovery)

Product: GORE™ Joint Sealant DF
Test dates: August 2006
Test institute: Fachhochschule Münster
Test procedures: Mechanical characteristic value test to EN 13555

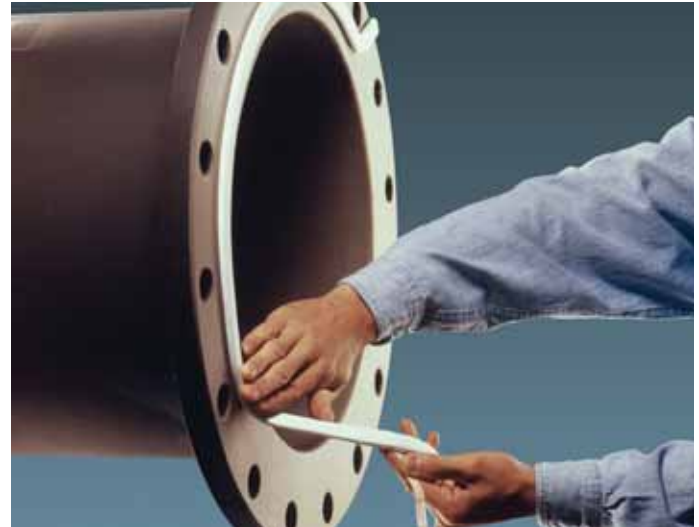
TEST OVERVIEW:

The E_G value describes the recovery (elastic behavior) of a seal when the load on it is reduced. It is related to the modulus of elasticity of other materials (high E_G value: low recovery; low E_G value: high recovery). It depends on the applied surface pressure, the seal thickness and the temperature.

During the test, the surface pressure is increased in stages and then reduced to 1/3 of the previous surface pressure; the change in the seal thickness when the load is reduced is measured. The EG value is calculated from the load reduction. The test is repeated at various temperatures.

Since EN 13555 specifies a test flange that is DN40/PN40 in size, only GORE™ Joint Sealant DF05 was tested. Due to the material properties of monoaxially expanded PTFE, the increase in the gasket width of GORE™ Joint Sealant DF depends on the pressure exerted on it. For the configuration and calculation of flange connections it is therefore easier to use line forces.

The initial line force is the ratio of the bolt load and the gasket length; thus, in the case of circular flanges their circumference (use the average diameter of the gasket). The line force is therefore independent of the increase in gasket width. Line force is measured in N/mm.



TEST RESULTS:

Type	Thickness [mm]	Temp. [°C]	E _{G96N/mm} [MPa]	E _{G144N/mm} [MPa]	E _{G192N/mm} [MPa]	E _{G240N/mm} [MPa]	E _{G288N/mm} [MPa]
DF05*	2	20	302	417	690	1059	880
DF05*	2	150	254	543	554	989	872

* DF05 = GORE™ Joint Sealant DF05

W. L. Gore & Associates (UK) Ltd. • Kirkton South Road • Kirkton Campus • Livingston, West Lothian EH54 7BT • UK • Tel: +44(0)1506678020 • Fax: +44(0)1506678022
 uksealants@wlgore.com

Europe/Middle East/Africa

W. L. Gore & Associates GmbH • D-85639 Putzbrunn • Germany
 Tel: +49(0)894612-2215 • Fax: +49(0)894612-2306 • ipd-deutschland@wlgore.com

USA/Canada/Far East/Latin America/S. America

W. L. Gore & Associates, Inc. • 100 Airport Road, PO Box • 1010 Elkton, MD 21921 • USA
 Tel: +1410-392-3200 • Fax: +1410-506-8445 • info@wlgore.com

gore.com/sealants

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