



FH Münster

Center of Sealing  
Technologies

Bürgerkamp 3  
D-48565 Steinfurt

# Certificate

## Z12112901-1

The flat gasket type  
**STRESS SAVER®**  
of the manufacturer

**GARLOCK GmbH**  
Falkenweg 1  
41430 Neuss  
Germany

has been tested in compliance with TA Luft in accordance with the VDI-guideline 2200 (2007-06) by the Department of Gasketing Research of the University of Applied Sciences Münster. The test was verified in a first time test with following test conditions:

Initial gasket thickness:	3 mm
Test flange:	DN40/PN40, EN1092-1, type B, welding-neck, 1.4571
Initial gasket stress:	30 MPa
Thermal storage temperature:	150 °C
Thermal storage duration:	48 h
Test conditions:	20 °C

The leak rate, measured at 20 °C, with a helium mass spectrometer and a differential pressure of 1 bar resulted in a leak rate of:

$$2.14 \cdot 10^{-5} \frac{\text{mbar} \cdot \text{l}}{\text{s} \cdot \text{m}}$$

Residual gasket stress ( $Q_R$ ): 7 MPa.

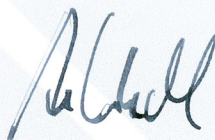
The maximum acceptable leak rate of  $1.0 \cdot 10^{-4} \frac{\text{mbar} \cdot \text{l}}{\text{s} \cdot \text{m}}$  according to VDI-guideline 2440 (2000-11) has not been exceeded. The above mentioned gasket is in accordance with TA Luft.

The blowout safety test in accordance to VDI-guideline 2200 resulted for

Test step 1 at $Q_R$ :	60 bar, no blowout
Test step 2 at 5 MPa ( $Q_{Smin}$ ):	60 bar, no blowout

This test certificate is only valid in combination with the test report 12112901-1.

Steinfurt, 2013-02-07



Prof. Dr. A. Riedl