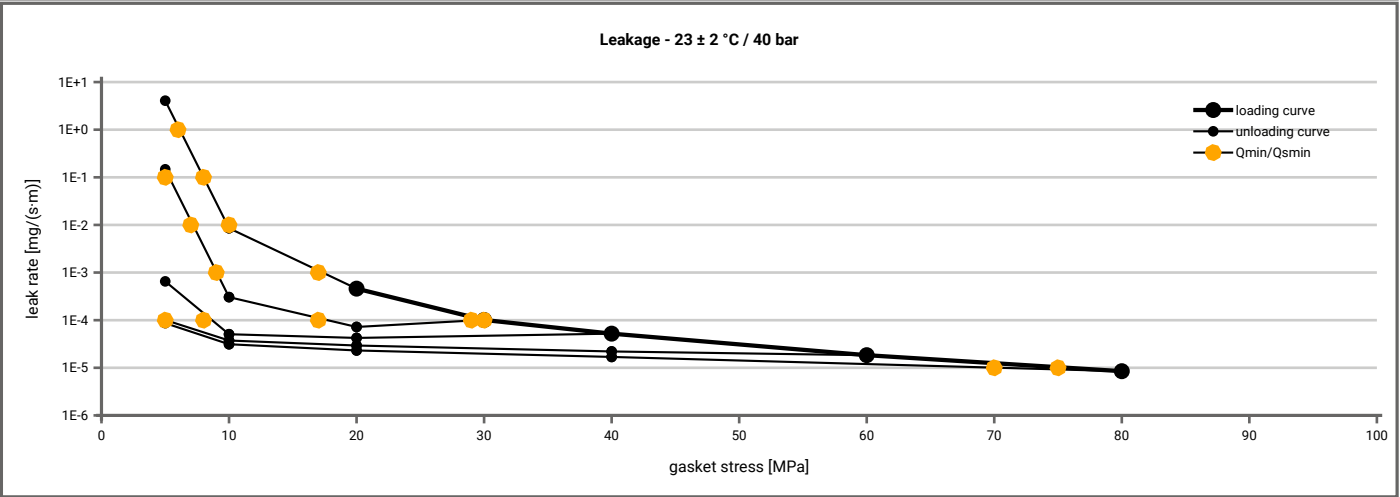


|                      |                                                                 |                                                      |
|----------------------|-----------------------------------------------------------------|------------------------------------------------------|
| Manufacturer address | Planichem, Via Consolare 41-43, 25030 Zocco di Erbusco (BS), IT | According to<br><b>DIN EN 13555</b><br><b>2014-7</b> |
| Product name         | SICHEM S11                                                      |                                                      |
| Product dimensions   | 92 x 49 x 1.5 mm (DIN EN 1514-1 1997-8)                         |                                                      |

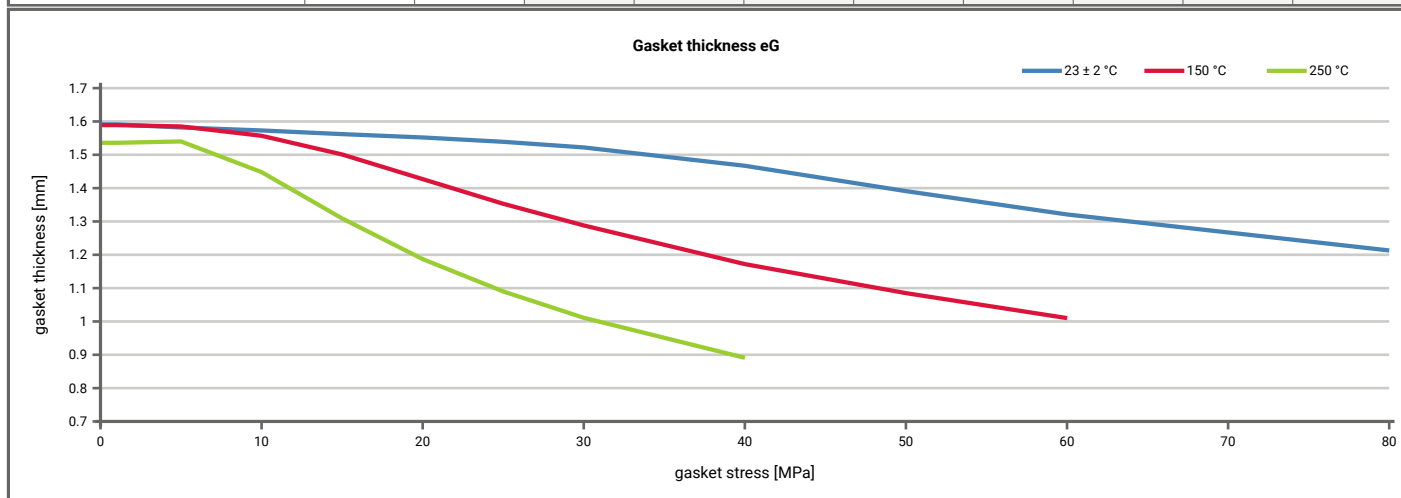
| Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 40 bar (T = 23 ± 2 °C) |                    |                     |                  |                  |                  |                  |
|---------------------------------------------------------------------------------------------------------------------|--------------------|---------------------|------------------|------------------|------------------|------------------|
| L [mg/(s·m)]                                                                                                        | $Q_{min(L)}$ [MPa] | $Q_{smin(L)}$ [MPa] |                  |                  |                  |                  |
|                                                                                                                     |                    | $Q_A = 20$ [MPa]    | $Q_A = 30$ [MPa] | $Q_A = 40$ [MPa] | $Q_A = 60$ [MPa] | $Q_A = 80$ [MPa] |
| 1E+1                                                                                                                | 20                 | 5                   | 5                | 5                | 5                | 5                |
| 1E-0                                                                                                                | 20                 | 6                   | 5                | 5                | 5                | 5                |
| 1E-1                                                                                                                | 20                 | 8                   | 5                | 5                | 5                | 5                |
| 1E-2                                                                                                                | 20                 | 10                  | 7                | 5                | 5                | 5                |
| 1E-3                                                                                                                | 20                 | 17                  | 9                | 5                | 5                | 5                |
| 1E-4                                                                                                                | 30                 |                     | 30               | 9                | 5                | 5                |
| 1E-5                                                                                                                | 76                 |                     |                  |                  |                  | 71               |
| 1E-6                                                                                                                |                    |                     |                  |                  |                  |                  |
| 1E-7                                                                                                                |                    |                     |                  |                  |                  |                  |
| 1E-8                                                                                                                |                    |                     |                  |                  |                  |                  |



|                      |                                                                 |                                                      |
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| Product name         | SICHEM S11                                                      |                                                      |
| Product dimensions   | 92 x 49 x 1.5 mm (DIN EN 1514-1 1997-8)                         |                                                      |

| Relaxation ratio $P_{QR}$ for stiffness $C = 500$ [kN/mm]                      |           |                      |                        |                      |                        |                      |          |                      |          |                      |
|--------------------------------------------------------------------------------|-----------|----------------------|------------------------|----------------------|------------------------|----------------------|----------|----------------------|----------|----------------------|
| Gasket stress                                                                  | 23 ± 2 °C |                      | Temperature 1 [150 °C] |                      | Temperature 2 [250 °C] |                      |          |                      |          |                      |
|                                                                                | $P_{QR}$  | $\Delta e_{Gc}$ [µm] | $P_{QR}$               | $\Delta e_{Gc}$ [µm] | $P_{QR}$               | $\Delta e_{Gc}$ [µm] | $P_{QR}$ | $\Delta e_{Gc}$ [µm] | $P_{QR}$ | $\Delta e_{Gc}$ [µm] |
| Stress level 1 [10 MPa]                                                        | 0.98      | 2                    | 0.91                   | 8                    | 0.64                   | 30                   |          |                      |          |                      |
| Stress level 2 [30 MPa]                                                        | 0.95      | 14                   | 0.64                   | 91                   | 0.41                   | 149                  |          |                      |          |                      |
|                                                                                |           |                      |                        |                      |                        |                      |          |                      |          |                      |
|                                                                                |           |                      |                        |                      |                        |                      |          |                      |          |                      |
|                                                                                |           |                      |                        |                      |                        |                      |          |                      |          |                      |
|                                                                                |           |                      |                        |                      |                        |                      |          |                      |          |                      |
|                                                                                |           |                      |                        |                      |                        |                      |          |                      |          |                      |
|                                                                                |           |                      |                        |                      |                        |                      |          |                      |          |                      |
| $P_{QR}$ and $\Delta e_{Gc}$ at maximum gasket stress to be applied $Q_{smax}$ |           |                      |                        |                      |                        |                      |          |                      |          |                      |
| $P_{QR}$ at $Q_{smax}$                                                         | 0.92      | 54                   | 0.65                   | 176                  | 0.43                   | 191                  |          |                      |          |                      |
| $Q_{smax}$                                                                     | 80 MPa    |                      | 60 MPa                 |                      | 40 MPa                 |                      |          |                      |          |                      |

| Sekant unloading modulus of the gasket $E_g$ [MPa] and gasket thickness $e_g$ [mm] |             |            |                        |            |                        |            |             |            |             |            |
|------------------------------------------------------------------------------------|-------------|------------|------------------------|------------|------------------------|------------|-------------|------------|-------------|------------|
| Gasket stress [MPa]                                                                | 23 ± 2 °C   |            | Temperature 1 [150 °C] |            | Temperature 2 [250 °C] |            |             |            |             |            |
|                                                                                    | $E_g$ [MPa] | $e_g$ [mm] | $E_g$ [MPa]            | $e_g$ [mm] | $E_g$ [MPa]            | $e_g$ [mm] | $E_g$ [MPa] | $e_g$ [mm] | $E_g$ [MPa] | $e_g$ [mm] |
| 0                                                                                  | 0           | 1.591      | 0                      | 1.589      | 0                      | 1.536      |             |            |             |            |
| 1                                                                                  | 0           | 1.591      | 0                      | 1.589      | 0                      | 1.536      |             |            |             |            |
| 5                                                                                  | 3983        | 1.582      | 2812                   | 1.585      | 1119                   | 1.540      |             |            |             |            |
| 10                                                                                 | 2509        | 1.573      | 1216                   | 1.557      | 651                    | 1.448      |             |            |             |            |
| 15                                                                                 | 2107        | 1.562      | 994                    | 1.501      | 696                    | 1.309      |             |            |             |            |
| 20                                                                                 | 2383        | 1.552      | 1066                   | 1.427      | 737                    | 1.187      |             |            |             |            |
| 25                                                                                 | 2420        | 1.539      | 1236                   | 1.353      | 857                    | 1.090      |             |            |             |            |
| 30                                                                                 | 2576        | 1.522      | 1394                   | 1.288      | 953                    | 1.011      |             |            |             |            |
| 40                                                                                 | 2814        | 1.467      | 1663                   | 1.172      | 1098                   | 0.891      |             |            |             |            |
| 50                                                                                 | 3083        | 1.391      | 1864                   | 1.085      |                        |            |             |            |             |            |
| 60                                                                                 | 3385        | 1.321      | 2002                   | 1.010      |                        |            |             |            |             |            |
| 80                                                                                 | 4195        | 1.213      |                        |            |                        |            |             |            |             |            |



|                                                                                    |             |                                         |
|------------------------------------------------------------------------------------|-------------|-----------------------------------------|
| Note: the content of darkened cells was not determined respectively is unnecessary | Rev.-No.: 1 | Creation date of this sheet: 2017-03-31 |
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