

# Burachem Brown 9655/R

## Standards and approvals

- FDA 21CFR 177.1550
- TA-Luft
- BAM
- DVGW

## Forms of supply

- Sheets 1,200 x 1,200 up to 1.0 mm thickness
- Sheets 1,500 x 1,500 from 1.5 mm thickness
- Standard thicknesses: 1.0 / 1.5 / 2.0 / 3.0 mm
- Cut rings, complete or in segments

## Recommended applications

- Process industry
- Petrochemical industry
- Chemical industry
- Pharmaceutical industry
- Pulp and paper industry
- Food and beverage industry
- Sugar industry
- Covers
- Hatches
- Reactor vessels
- Process vessels
- Flange connections
- Pipe connections
- Maintenance seals

## Physical properties (Gasket thickness 2.00 mm)

| Property                                                 | Standard           | Unity          | Value*                |
|----------------------------------------------------------|--------------------|----------------|-----------------------|
| Identification                                           | DIN 28 091-3       |                | TF - M - O            |
| Density                                                  | DIN 28 090-2       | [g/cm³]        | 2.10                  |
| Tensile strength                                         | DIN 52 910         | [N/mm²]        | 17                    |
| Residual stress $\sigma_{dE/16}$<br>150°C, 30 N/mm², 16h | DIN 52 913         | [N/mm²]        | 16                    |
| Compressibility                                          | ASTM F 36 J        | [%]            | 5                     |
| Recovery                                                 | ASTM F 36 J        | [%]            | 45                    |
| Cold compressibility $\epsilon_{KSW}$                    | DIN 28 090-2       | [%]            | 3                     |
| Cold recovery $\epsilon_{KRW}$                           | DIN 28 090-2       | [%]            | 1                     |
| Hotcreep $\epsilon_{WSW/150}$                            | DIN 28 090-2       | [%]            | 20                    |
| Hot recovery $\epsilon_{WRW/150}$                        | DIN 28 090-2       | [%]            | 3                     |
| Leakage rate                                             | DIN 3535-6         | [mg/(m·s)]     | < 0.015               |
| Specific leakage rate acc. TA Luft                       | VDI 2440 / TA Luft | [mbar·l/(s·m)] | 5.4* 10 <sup>-7</sup> |
| Helium, 1 bar, 30 MPA                                    |                    |                |                       |

## Gasket Characteristics k0 x KD

| AD-Merkblatt B7 / DIN V 2505 |                   |                                          |                        |
|------------------------------|-------------------|------------------------------------------|------------------------|
| colour                       |                   | Burachem 9655 R                          |                        |
| Thickness<br>[mm]            | Pressure<br>[bar] | k <sub>0</sub> x K <sub>D</sub><br>[Nmm] | k <sub>1</sub><br>[mm] |
| 2.0                          | 40                | 19 x b <sub>D</sub>                      | 1.3 x b <sub>D</sub>   |

## Gasket characteristics acc. DIN EN 13555 (02/2005)

| T<br>[°C]                                 | Tightness-<br>class L | Q <sub>min(L)</sub><br>[N/mm <sup>2</sup> ] |      |      |      | Q <sub>Smin(L)</sub><br>[N/mm <sup>2</sup> ] |      |      |      |                        |     |     |     |                        |     |     |     |                        |     |     |  |
|-------------------------------------------|-----------------------|---------------------------------------------|------|------|------|----------------------------------------------|------|------|------|------------------------|-----|-----|-----|------------------------|-----|-----|-----|------------------------|-----|-----|--|
|                                           |                       |                                             |      |      |      | Q [N/mm <sup>2</sup> ]                       |      |      |      | Q [N/mm <sup>2</sup> ] |     |     |     | Q [N/mm <sup>2</sup> ] |     |     |     | Q [N/mm <sup>2</sup> ] |     |     |  |
|                                           |                       |                                             |      |      |      | 20                                           | 40   | 60   | 80   | 20                     | 40  | 60  | 80  | 20                     | 40  | 60  | 80  | 40                     | 60  | 80  |  |
|                                           |                       | P <sub>i</sub> [bar]                        |      |      |      | P <sub>i</sub> [bar]                         |      |      |      | P <sub>i</sub> [bar]   |     |     |     | P <sub>i</sub> [bar]   |     |     |     | P <sub>i</sub> [bar]   |     |     |  |
|                                           |                       | 10                                          | 20   | 40   | 80   | 10                                           |      |      |      | 20                     |     |     |     | 40                     |     |     |     | 80                     |     |     |  |
| RT                                        | L <sub>1,0</sub>      | 6                                           | <10  | 10   | <20  | <5                                           | <5   | <5   | <5   | <10                    | <10 | <10 | <10 | <10                    | <10 | <10 | <10 | <10                    | <10 | <10 |  |
|                                           | L <sub>0,1</sub>      | 10                                          | 10   | 14   | <20  | <5                                           | <5   | <5   | <5   | <10                    | <10 | <10 | <10 | <10                    | <10 | <10 | <10 | <10                    | <10 | <10 |  |
|                                           | L <sub>0,01</sub>     | 13                                          | 13   | 18   | <20  | <5                                           | <5   | <5   | <5   | <10                    | <10 | <10 | <10 | 16                     | <10 | <10 | <10 | <10                    | <10 | <10 |  |
|                                           | L <sub>0,001</sub>    | 16                                          | 16   | 24   | 28   | 8                                            | <5   | <5   | <5   | <10                    | <10 | <10 | <10 | ---                    | <10 | <10 | <10 | <10                    | <10 | <10 |  |
| Q <sub>Smax</sub><br>[N/mm <sup>2</sup> ] |                       | P <sub>QR</sub><br>Stiffness 500 kN/mm      |      |      |      | E <sub>6</sub><br>[N/mm <sup>2</sup> ]       |      |      |      |                        |     |     |     |                        |     |     |     |                        |     |     |  |
|                                           |                       | Q [N/mm <sup>2</sup> ]                      |      |      |      | Q [N/mm <sup>2</sup> ]                       |      |      |      |                        |     |     |     |                        |     |     |     |                        |     |     |  |
|                                           |                       |                                             |      |      |      | 10                                           | 25   | 10   | 20   | 30                     | 40  | 50  | 60  | 80                     |     |     |     |                        |     |     |  |
| RT                                        | >200                  | 0.97                                        | 0.94 | 1224 | 1848 | 2473                                         | 3097 | 3722 | 4346 | 5595                   |     |     |     |                        |     |     |     |                        |     |     |  |
| 100                                       | 200                   | 0.94                                        | 0.74 | 1100 | 1417 | 1735                                         | 2052 | 2369 | 2687 | 3322                   |     |     |     |                        |     |     |     |                        |     |     |  |
| 200                                       | 160                   | 0.80                                        | 0.46 | 785  | 933  | 1082                                         | 1230 | 1378 | 1526 | 1823                   |     |     |     |                        |     |     |     |                        |     |     |  |
| 260                                       | 100                   | 0.68                                        | 0.32 | 683  | 771  | 860                                          | 949  | 1038 | 1126 | 1304                   |     |     |     |                        |     |     |     |                        |     |     |  |

Test sample: DN40/PN40 acc. EN 1514-1: 49 x 92 mm