

Buratherm N 9544/N

Standards and approvals

- DVGW
- KTW
- WRC
- W270
- HTB
- BAM (max. 120 °C/130 bar)
- TA-Luft

Forms of supply

- Sheets: 1,500 x 1,500 mm
- Thicknesses: 0.5/ 0.8 mm
- Sheets: 2,000 x 1,500 mm
- Thicknesses: 1.0/ 1.5/ 2.0/ 3.0 mm

Recommended applications

- Process industry
- Oil and gas industry
- Petrochemical industry
- Chemical industry
- Pharmaceutical industry
- Power plant technology
- Metal production and processing
- Centrifugal pumps
- Piston pumps
- Compressors
- Fans
- Blowers
- Valves
- Heat exchangers
- Flange connections
- Pipe connections

Physical properties (Gasket thickness 2.00 mm)

Property	Standard	Unity	Value*
Identification	DIN 28 091-2		FA-A 1-0
Density	DIN 28 090-2	[g/cm³]	1.70
Tensile strength	DIN 52 910		
longitudinal		[N/mm²]	18
transverse		[N/mm²]	14
Residual stress $\sigma_{dE/16}$	DIN 52 913		
175°		[N/mm²]	37
300°C,		[N/mm²]	30
Compressibility	ASTM F 36 J	[%]	7
Recovery	ASTM F 36 J	[%]	60
Cold compressibility ϵ_{KSW}	DIN 28 090-2	[%]	6
Cold recovery ϵ_{KRW}	DIN 28 090-2	[%]	3
Hotcreep $\epsilon_{WSW/200}$	DIN 28 090-2	[%]	6
Hot recovery $\epsilon_{WRW/200}$	DIN 28 090-2	[%]	2
Recovery R	DIN 28 090-2	[mm]	0.04
Leakage rate	DIN 3535-6	[mg/(m·s)]	≤ 0.1
Specific leakage rate $\lambda_{2,0}$	DIN 28 090-2	[mg/(m·s)]	≤ 0.1
Fluid resistance	ASTM F 146		
ASTM IRM903	5h/150°C		
Weight change		[%]	≤ 10
Thickness increase		[%]	≤ 5
ASTM Fuel B	5h/23°C		
Weight change		[%]	≤ 10
Thickness increase		[%]	≤ 5
Leachable Chloride content	FZT PV-001-133	[ppm]	≤ 50

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

T [°C]	Tightness- class L	$Q_{min(L)}$ [N/mm²]				$Q_{Smin(L)}$ [N/mm²]																			
		P_i [bar]				20				40				60				80							
		10	20	40	80	P_i [bar]				20				40				60				80			
	$L_{1,0}$	<5	<10	<10	<20	<5	<5	<5	<5	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	$L_{0,1}$	6	14	25	45	<5	<5	<5	<5	<10	<10	<10	<10	---	<10	<10	<10	<10	---	14	<10	<10	<10	<10	<10
RT	$L_{0,01}$	31	48	67	---	---	12	<5	<5	---	---	19	<10	---	---	---	24	---	---	---	---	---	---	---	---
	$L_{0,001}$	75	---	---	---	---	---	---	35	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		Q_{Smax} [N/mm²]			P_{OR} Stiffness 500 kN/mm				E_6 [N/mm²]																
		Q [N/mm²]			Q [N/mm²]				Q [N/mm²]																
		30	50	Q_{Smax}	10	20	30	40	50	60	70	80	100	120	140	160	180	200	220						
RT	>220	0.95	0.97	0.98	964	1197	1430	1662	1895	2128	2360	2593	3058	3524	3989	4454	4919	5385	5850						
100	120	0.89	0.91	0.93	983	1197	1410	1624	1838	2051	2265	2478	2906	3333	---	---	---	---	---						
200	80	0.85	0.88	0.89	1017	1249	1482	1714	1946	2179	2411	2644	---	---	---	---	---	---	---						
300	60	0.75	0.80	0.81	1901	2223	2545	2867	3189	3511	---	---	---	---	---	---	---	---	---						

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

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All technical specifications are based on extensive tests and our many years of experience. The diversity of possible applications means, however, that they can serve only as guide values. We must be notified of the exact conditions of application before we can provide any guarantee for a specific case. Subject to change.

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Gasket characteristics acc. DIN 28090-1, AD-Merkblatt B7, DIN V 2505, ASME-Code

DIN 28090 Part 1 (9/95) (DIN E 2505 Part 2)					AD-Merkblatt B7 DIN V 2505					ASME-Code					
P ₁ [bar]	Thickness h _D [mm]	σ _{VU} [N/mm ²]	σ _{V0} [N/mm ²]	m	σ _{B0} [N/mm ²]					b _D : h _D	k _D xK _D [N/mm]	k ₁ [mm]	m	y [psi]	y [N/mm ²]
					20°C	100°C	200°C	300°C	400°C						
10	1.0	6	190	1.3	190	145	85	75	30	10 : 1	6 x b _D	1.3 x b _D	2.5	870	6
	1.5	7	145	1.3	155	100	70	60	25	6.7 : 1	7 x b _D	1.3 x b _D	2.5	1015	7
	2.0	8	120	1.3	140	75	60	50	20	5 : 1	8 x b _D	1.3 x b _D	2.5	1160	8
16	3.0	16	100	1.3	100	60	50	45	15	3.3 : 1	16 x b _D	1.3 x b _D	2.5	2320	16
	1.0	8	190	1.3	190	145	85	75	30	10 : 1	8 x b _D	1.3 x b _D	2.5	1160	8
	1.5	9	145	1.3	155	100	70	60	25	6.7 : 1	9 x b _D	1.3 x b _D	2.5	1305	9
25	2.0	10	120	1.3	140	75	60	50	20	5 : 1	10 x b _D	1.3 x b _D	2.5	1450	10
	3.0	25	100	1.3	100	60	50	45	15	3.3 : 1	25 x b _D	1.3 x b _D	2.5	3625	25
	1.0	13	190	1.3	190	145	85	75	30	10 : 1	13 x b _D	1.3 x b _D	2.5	1885	13
40	1.5	16	145	1.3	155	100	70	60	25	6.7 : 1	16 x b _D	1.3 x b _D	2.5	2320	16
	2.0	17	120	1.3	140	75	60	50	20	5 : 1	17 x b _D	1.3 x b _D	2.5	2465	17
	3.0	38	100	1.3	100	60	50	45	15	3.3 : 1	38 x b _D	1.3 x b _D	2.5	5510	38
53	1.0	16	190	1.3	190	145	85	75	30	10 : 1	16 x b _D	1.3 x b _D	2.5	2320	16
	1.5	21	145	1.3	155	100	70	60	25	6.7 : 1	21 x b _D	1.3 x b _D	2.5	3045	21
	2.0	26	120	1.3	140	75	60	50	20	5 : 1	26 x b _D	1.3 x b _D	2.5	3770	26
	3.0	53	100	1.3	100	60	50	45	15	3.3 : 1	53 x b _D	1.3 x b _D	2.5	7685	53

m The m-factor is a value to describe the minimum surface pressure under operating conditions. Up to now there does not exist a definite test specification. The m-factor can be looked at in different ways and depends on the tightness class, the temperature and the surface pressure in the installed state. Within the Brite EuRam research project m-factors between 1.3 and 3.8 were found as average values for graphite gaskets. The user may judge to calculate with different factors (e.g. m = 2).

m The m-factors according to DIN 28090 and ASME-code are defined variably - from this reason the values differ.

145 psi conversion factor N/mm² in psi