

Statotherm SSTC-TAL 9592/P

Standards and approvals

- TA-Luft
- Fire safe (API607/BS6755)
- BAM (O₂: 200 °C / 130 bar)
- DVGW
- Blow out safety according to VDI 2200 class C
- DIN 28091-4: GR-10-I-1M-Cr

Forms of supply

- Sheets: 1,000 x 1,000/ 1,500 x 1,500 mm
- Thickness: 1.0 /1.6 /2.0 /3.0 mm

Physical properties (Gasket thickness 1.6 mm)

Property	Standard	Unity	Value*
Identification	DIN 28 091-4		GR-10-I-1M-Cr
Density	DIN 28 090-2	[g/cm ³]	1.40
Tensile strength	DIN 52 910		
longitudinal		[N/mm ²]	25
transverse		[N/mm ²]	10
Residual stress $\sigma_{dE/16}$	DIN 52 913		
300°C		[N/mm ²]	> 45
Compressibility	ASTM F 36 J	[%]	35
Recovery	ASTM F 36 J	[%]	20
Cold compressibility ϵ_{KSW}	DIN 28 090-2	[%]	30 – 40
Cold recovery ϵ_{KRW}	DIN 28 090-2	[%]	3.5 – 5.0
Hotcreep $\epsilon_{WSW/300}$	DIN 28 090-2	[%]	< 5
Hot recovery $\epsilon_{WRW/300}$	DIN 28 090-2	[%]	> 3
Recovery R	DIN 28 090-2	[mm]	0.065
Leakage TA-Luft	VDI 2200	[mbar·l/(s·m)]	< 0.0001
Flangetest 30 MPa			
300°C, 1 bar Helium			
Blow out test	VDI 2200 (draft)		
Class A (30 MPa, 60 bar, N ₂)			passed
Class B (10 MPa, 60 bar, N ₂)			passed
Class C (7.5 MPa, 60 bar, N ₂)			passed
Chloride content	DIN 28 090-2	[ppm]	≤ 50

Recommended applications

- Process industry
- Oil and gas industry
- Petrochemical industry
- Chemical industry
- Pharmaceutical industry
- Power plant technology
- Heat exchangers
- Covers
- Reactor vessels
- Process vessels
- Flange connections
- Maintenance seals

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

T [°C]	Tightness- class L	Q _{min(L)} [N/mm ²]								Q _{Smin(L)} [N/mm ²]													
						Q [N/mm ²]				Q [N/mm ²]				Q [N/mm ²]				Q [N/mm ²]					
						20	40	60	80	20	40	60	80	20	40	60	80	20	40	60	80		
		P _i [bar]				P _i [bar]				P _i [bar]				P _i [bar]				P _i [bar]					
		10	25	40	63	10				25				40				63					
RT	L _{1,0}	5	6	6	10	5	5	5	5	5	5	5	5	5	5	5	5	10	10	10	10		
	L _{0,1}	5	9	10	14	5	5	5	5	5	5	5	5	5	5	5	5	10	10	10	10		
	L _{0,01}	9	17	20	30	5	5	5	5	9	5	5	5	19	5	5	5	---	10	10	10		
	L _{0,001}	25	36	42	56	---	5	5	5	---	19	7	5	---	---	10	5	---	---	34	14		
Q _{Smax} [N/mm ²]		P _{QR} Stiffness 500 kN/mm				E _G [N/mm ²]																	
		Q [N/mm ²]		Q _{Smax}		20	30	40	50	60	80	100	120	140	160	180	200						
RT	200	0.99	1.00	473	815	1049	1565	1807	2682	4051	4457	5071	5534	6759	7815								
100	160	0.94	0.99	513	761	1222	1725	2157	2627	3198	4355	6866	8418	---	---								
200	140	0.93	0.97	564	811	1459	1840	1906	2569	3116	4622	6451	---	---	---								
300	140	0.93	0.96	624	848	1104	1780	1934	2876	3399	4270	4534	---	---	---								
400	110	0.93	0.93	540	808	1346	1801	1856	2310	3029	---	---	---	---	---								

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

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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 _i [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 ₀ 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	2.0	10	150	1.3	150	130	130	130	120	10 : 1	10 x b _D	1.3 x b _D	2.5	1450	10
16	2.0	10	150	1.3	150	130	130	130	120	10 : 1	10 x b _D	1.3 x b _D	2.5	1450	10
25	2.0	13	150	1.3	150	130	130	130	120	10 : 1	13 x b _D	1.3 x b _D	2.5	1885	13
40	2.0	20	150	1.3	150	130	130	130	120	10 : 1	20 x b _D	1.3 x b _D	2.5	2900	20
80	2.0	28	150	1.3	150	130	130	130	120	10 : 1	28 x b _D	1.3 x b _D	2.5	4060	28

* σ_{VU} is determined with the gas leakage (N₂) = 0.1 mg/(s*m) (ca. 1.0 ml/min) acc. to DIN 28090-1 at test sample of dimension 90 x 50 x 1.6 mm

** σ_{V0}, σ_{B0} is determined according to DIN 28090-1 at test sample of dimension 90 x 50 x 1.6 mm

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