

Statotherm SSTC 9592/MP

Standards and approvals

- DVGW
- KTW
- Fire safe (API607 / BS6755)
- BAM (O₂: 200 °C / 130 bar)

Forms of supply

- Sheets 1,000 x 1,000 mm
- Thickness: 1.0 / 1.5 / 2.0 / 3.0 mm
- According to drawing, measurements or other agreements.

Recommended applications

- Process industry
- Oil and gas industry
- Petrochemical industry
- Chemical industry
- Pharmaceutical industry
- Power plant technology
- Pulp and paper industry
- Water and waste water technology
- Mining industry
- Building services industry
- Food and beverage industry
- Shipbuilding
- Sugar industry
- Metal production and processing
- Heat exchangers
- Covers
- Reactor vessels
- Process vessels
- Flange connections
- Pipe connections
- Exhaust ducting
- Furnaces

Physical properties (Gasket thickness 2.00 mm)

Property	Standard	Unity	Value*
Identification	DIN 28 091-4		GR-10-I-1M-Cr
Density	DIN 28 090-2	[g/cm³]	1.35
Tensile strength	DIN 52 910		
longitudinal		[N/mm²]	17
transverse		[N/mm²]	8
Residual stress $\sigma_{dE/16}$	DIN 52 913		
175°C		[N/mm²]	47
300°C		[N/mm²]	45
Compressibility	ASTM F 36 J	[%]	40
Recovery	ASTM F 36 J	[%]	15
Cold compressibility ϵ_{KSW}	DIN 28 090-2	[%]	39.0
Cold recovery ϵ_{KRW}	DIN 28 090-2	[%]	4.0
Hotcreep $\epsilon_{WSW/300}$	DIN 28 090-2	[%]	2.0
Hot recovery $\epsilon_{WRW/300}$	DIN 28 090-2	[%]	3.5
Recovery R	DIN 28 090-2	[mm]	0.070
Leakage rate	DIN 3535-6	[mg/(m·s)]	≤ 0.100
Specific leakage rate $\lambda_{2,0}$	DIN 28 090-2	[mg/(m·s)]	0.050
Fluid resistance	ASTM F 146		
ASTM IRM903	5h/150°C		
Weight change		[%]	30
Thickness increase		[%]	6
ASTM Fuel B	5h/23°C		
Weight change		[%]	30
Thickness increase		[%]	6
Leachable Chloride content	DIN 28 090-2	[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]											
						Q [N/mm²]				Q [N/mm²]				Q [N/mm²]			
						20	40	60	80	20	40	60	80	20	40	60	80
		P _i [bar]				P _i [bar]				P _i [bar]				P _i [bar]			
		10	20	40	80	10	20	40	80	20	40	60	80	40	60	80	80
RT	L _{1,0}	<5	<10	<10	<20	<5	<5	<5	<5	<10	<10	<10	<10	<10	<10	<10	<10
	L _{0,1}	7	<10	10	20	<5	<5	<5	<5	<10	<10	<10	<10	<10	<10	<10	<10
	L _{0,01}	20	29	39	52	---	<5	<5	<5	---	10	<10	<10	---	36	12	<10
	L _{0,001}	57	64	75	---	---	---	50	18	---	---	---	33	---	---	65	---
		Q _{Smax} [N/mm²]				P _{QR} Stiffness 500 kN/mm				E _G [N/mm²]							
						Q [N/mm²]				Q [N/mm²]							
		30	50	Q _{Smax}		10	20	30	40	50	60	70	80	100	120	140	160
RT	>220	0.99	0.99	1.0		610	752	895	1037	1179	1322	1464	1607	1891	2176	2461	2745
100	180	0.97	0.98	0.99		520	674	828	982	1136	1290	1444	1598	1906	2214	2522	2830
200	160	0.95	0.97	0.98		417	600	782	965	1148	1331	1514	1697	2063	2429	2794	---
300	160	0.93	0.96	0.97		445	636	827	1017	1208	1399	1590	1780	2162	2543	2924	---
400	160	0.93	0.96	0.96		501	651	800	950	1100	1249	1399	1548	1848	2147	2446	---

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	Thickness h _D	σ _{VU}	σ _{V0}	m	σ _{B0}						b _D : h _D	k ₀ K _D	k ₁	m	y	y
[bar]	[mm]	[N/mm ²]	[N/mm ²]		[N/mm ²]							[N/mm]	[mm]		[psi]	[N/mm ²]
					20°C	100°C	200°C	300°C	400°C	500°C						
10	1.0	10	175	1.3	175	165	155	150	150	150	10 : 1	10 x b _D	1.3 x b _D	2.5	1450	10
	1.5	10	120	1.3	120	110	105	100	100	100	6.7 : 1	10 x b _D	1.3 x b _D	2.5	1450	10
	2.0	10	90	1.3	90	90	85	85	85	85	5 : 1	10 x b _D	1.3 x b _D	2.5	1450	10
	3.0	25	70	1.3	70	70	70	65	65	65	3.3 : 1	25 x b _D	1.3 x b _D	2.5	3625	25
16	1.0	10	175	1.3	175	165	155	150	150	150	10 : 1	10 x b _D	1.3 x b _D	2.5	1450	10
	1.5	10	120	1.3	120	110	105	100	100	100	6.7 : 1	10 x b _D	1.3 x b _D	2.5	1450	10
	2.0	10	90	1.3	90	90	85	85	85	85	5 : 1	10 x b _D	1.3 x b _D	2.5	1450	10
	3.0	34	70	1.3	70	70	70	65	65	65	3.3 : 1	34 x b _D	1.3 x b _D	2.5	4930	34
25	1.0	10	175	1.3	175	165	155	150	150	150	10 : 1	10 x b _D	1.3 x b _D	2.5	1450	10
	1.5	11	120	1.3	120	110	105	100	100	100	6.7 : 1	11 x b _D	1.3 x b _D	2.5	1595	11
	2.0	12	90	1.3	90	90	85	85	85	85	5 : 1	12 x b _D	1.3 x b _D	2.5	1740	12
	3.0	47	70	1.3	70	70	70	65	65	65	3.3 : 1	47 x b _D	1.3 x b _D	2.5	6815	47
40	1.0	10	175	1.3	175	165	155	150	150	150	10 : 1	10 x b _D	1.3 x b _D	2.5	1450	10
	1.5	14	120	1.3	120	110	105	100	100	100	6.7 : 1	14 x b _D	1.3 x b _D	2.5	2030	14
	2.0	17	90	1.3	90	90	85	85	85	85	5 : 1	17 x b _D	1.3 x b _D	2.5	2465	17
	3.0	50	70	1.3	70	70	70	65	65	65	3.3 : 1	50 x b _D	1.3 x b _D	2.5	7250	50
80	1.0	20	175	1.3	175	165	155	150	150	150	10 : 1	20 x b _D	1.3 x b _D	2.5	2900	20
	1.5	25	120	1.3	120	110	105	100	100	100	6.7 : 1	25 x b _D	1.3 x b _D	2.5	3625	25
	2.0	27	90	1.3	90	90	85	85	85	85	5 : 1	27 x b _D	1.3 x b _D	2.5	3915	27
	3.0	75	70	1.3	70	70	70	65	65	65	3.3 : 1	75 x b _D	1.3 x b _D	2.5	10875	75

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