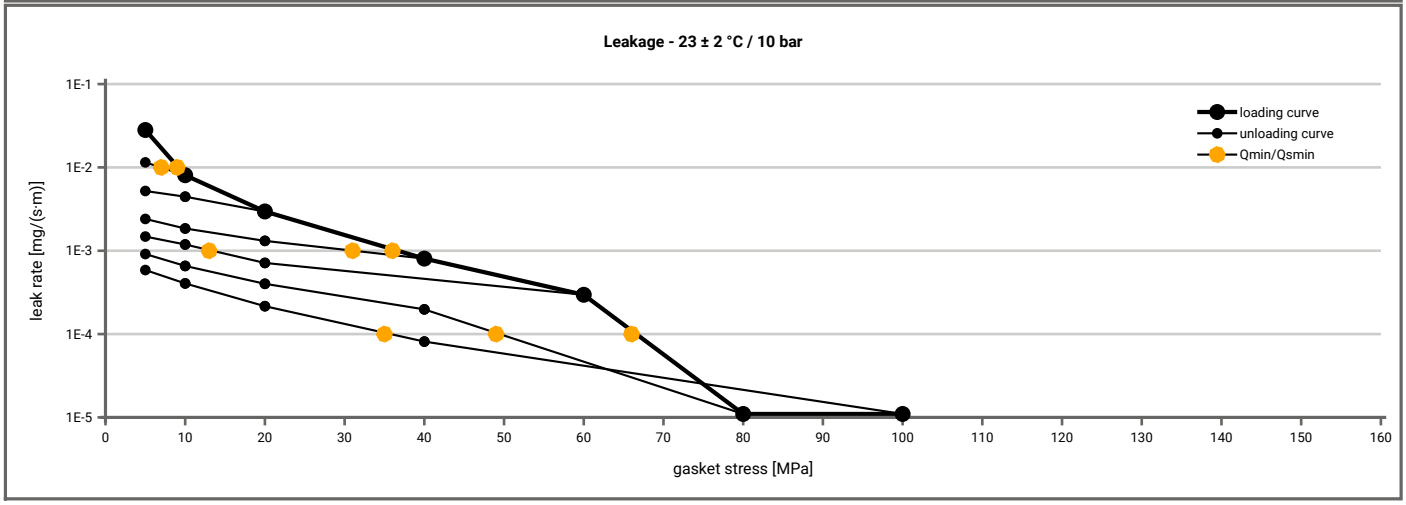
Manufacturer address	KLINGER Kempchen GmbH, Im Waldteich 21, 46147 Oberhausen, DE	According to **DIN EN 13555 2005-2**
Product name	Rivatherm Super A1 RS2E2-S (1.4401; 98%, D = 1,0g/ccm)	
Product dimensions	92 x 49 x 2 mm (DIN EN 1514-1 1997-8)	

Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 10 bar (T = 23 ± 2 °C)

L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]						
		Q_A = 5.2 [MPa]	Q_A = 10 [MPa]	Q_A = 20 [MPa]	Q_A = 40 [MPa]	Q_A = 60 [MPa]	Q_A = 80 [MPa]	Q_A = 100 [MPa]
1E-0	5		5	5	5	5	5	5
1E-1	5		5	5	5	5	5	5
1E-2	9		7	5	5	5	5	5
1E-3	37				31	14	5	5
1E-4	67						50	36
1E-5								
1E-6								
1E-7								



Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 40 bar (T = 23 ± 2 °C)

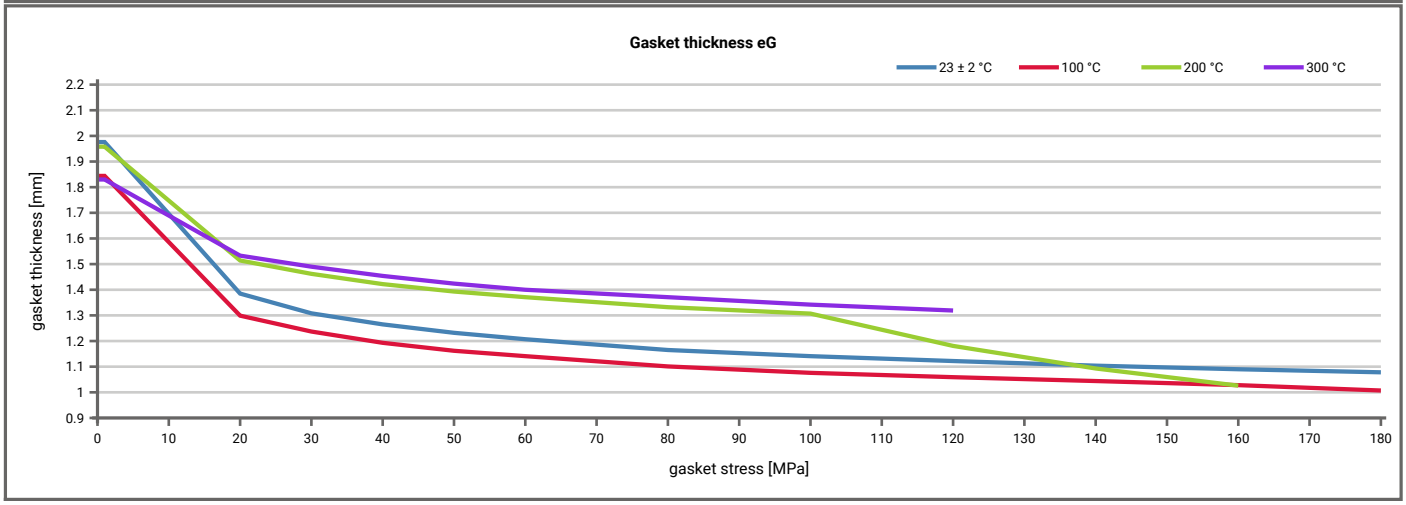
L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]					
		Q_A = 10 [MPa]	Q_A = 20 [MPa]	Q_A = 40 [MPa]	Q_A = 60 [MPa]	Q_A = 80 [MPa]	Q_A = 100 [MPa]
1E-0	10		10	10	10	10	10
1E-1	10		10	10	10	10	10
1E-2	25			10	10	10	10
1E-3	62					39	21
1E-4	86						64
1E-5							
1E-6							
1E-7							

Note: the content of darkened cells was not determined respectively is unnecessary	Rev.-No.: **2**	Creation date of this sheet: **2025-06-13**

Manufacturer address	KLINGER Kempchen GmbH, Im Waldteich 21, 46147 Oberhausen, DE	According to **DIN EN 13555 2005-2**
Product name	Rivatherm Super A1 RS2E2-S (1.4401; 98%, D = 1,0g/ccm)	
Product dimensions	92 x 49 x 2 mm (DIN EN 1514-1 1997-8)	

Relaxation ratio P_{QR} for stiffness C = 500 [kN/mm]										
Gasket stress	**23 ± 2 °C**		**Temperature 1 [100 °C]**		**Temperature 2 [200 °C]**		**Temperature 3 [300 °C]**			
	P_{QR}	**Δe_{Gc} [µm]**	**P_{QR}**	**Δe_{Gc} [µm]**	**P_{QR}**	**Δe_{Gc} [µm]**	**P_{QR}**	**Δe_{Gc} [µm]**	**P_{QR}**	**Δe_{Gc} [µm]**
Stress level 1 [30 MPa]	0.98	6	0.94	16	0.88	31	0.99	4		
Stress level 2 [50 MPa]	0.99	6	0.96	17	0.93	29	0.94	25		
P_{QR} and Δe_{Gc} at maximum gasket stress to be applied (Q_{smax})										
P_{QR} at Q_{smax}	1.00	8	0.97	45	0.83	235	0.78	227		
Q_{smax}	180 MPa		180 MPa		160 MPa		120 MPa			

Sekant unloading modulus of the gasket E_G [MPa] and gasket thickness e_G [mm]										
Gasket stress [MPa]	**23 ± 2 °C**		**Temperature 1 [100 °C]**		**Temperature 2 [200 °C]**		**Temperature 3 [300 °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	1.976	0	1.844	0	1.958	0	1.830		
1	0	1.976	0	1.844	0	1.958	0	1.830		
20	473	1.385	577	1.299	509	1.514	462	1.533		
30	805	1.308	952	1.237	688	1.462	736	1.490		
40	1209	1.265	1109	1.193	1000	1.422	1310	1.454		
50	1354	1.232	1337	1.162	1391	1.393	1433	1.424		
60	1801	1.207	1980	1.141	1494	1.371	1627	1.400		
80	2197	1.165	2029	1.101	1785	1.332	3379	1.371		
100	3026	1.141	3011	1.076	2723	1.307	2422	1.342		
120	4206	1.122	3865	1.059	3458	1.181	2547	1.319		
140	4466	1.104	4780	1.044	3832	1.093				
160	4437	1.090	4751	1.028	3394	1.026				
180	4845	1.078	5195	1.007						



Note: the content of darkened cells was not determined respectively is unnecessary	Rev.-No.: **2**	Creation date of this sheet: **2025-06-13**