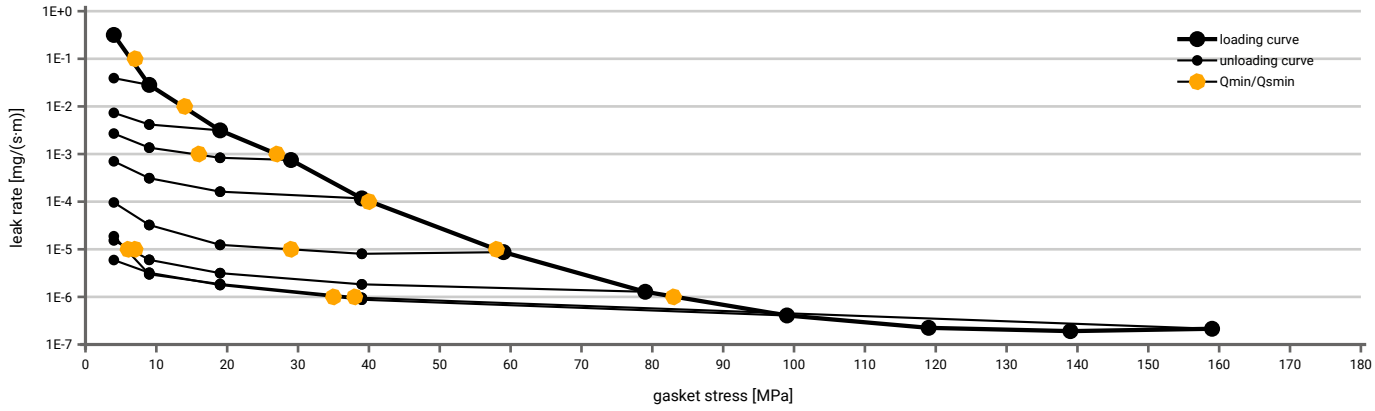
Manufacturer address	Garlock GmbH, Falkenweg 1, 41468 Neuss, DE	According to
Product name	BLUE-GARD© 3000	**DIN EN 13555**
Product dimensions	92 x 49 x 2 mm (DIN EN 1514-1 1997-8)	**2014-7**

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 = 4.8 [MPa]	Q_A = 9.7 [MPa]	Q_A = 20 [MPa]	Q_A = 30 [MPa]	Q_A = 40 [MPa]	Q_A = 60 [MPa]	Q_A = 80 [MPa]	Q_A = 100 [MPa]	Q_A = 120 [MPa]	Q_A = 140 [MPa]	Q_A = 159 [MPa]
1E-0	5		5	5	5	5	5	5	5			5
1E-1	7		5	5	5	5	5	5	5			5
1E-2	14			5	5	5	5	5	5			5
1E-3	28				16	5	5	5	5			5
1E-4	41						5	5	5			5
1E-5	59						30	7	5			7
1E-6	84								36			38
1E-7												
1E-8												

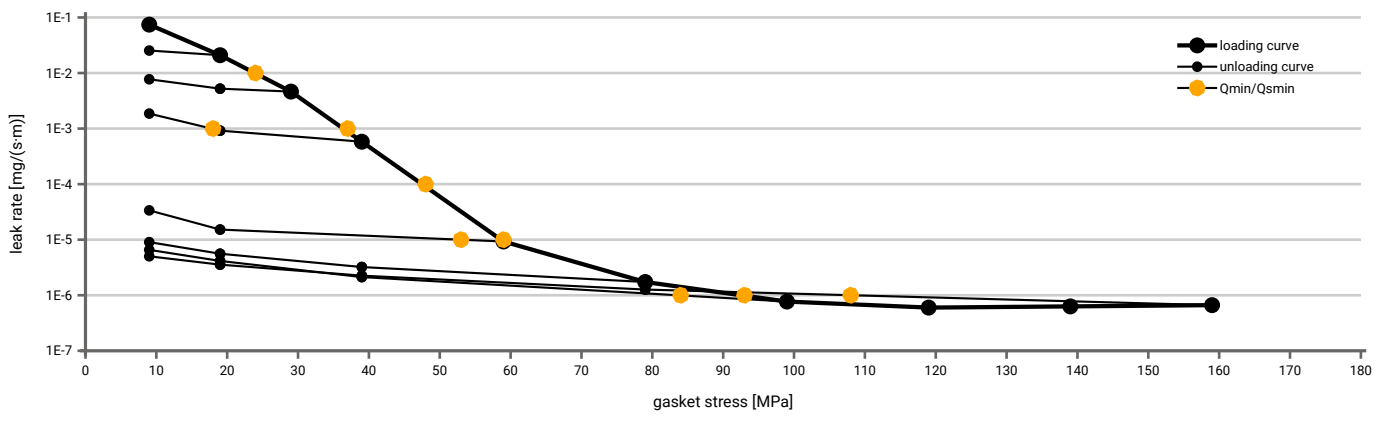
Leakage - 23 ± 2 °C / 10 bar



Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 20 bar (T = 23 ± 2 °C)

L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]									
		Q_A = 9.8 [MPa]	Q_A = 20 [MPa]	Q_A = 30 [MPa]	Q_A = 40 [MPa]	Q_A = 60 [MPa]	Q_A = 80 [MPa]	Q_A = 100 [MPa]	Q_A = 120 [MPa]	Q_A = 140 [MPa]	Q_A = 160 [MPa]
1E-0	10		10	10	10	10	10	10			10
1E-1	10		10	10	10	10	10	10			10
1E-2	25			10	10	10	10	10			10
1E-3	37				18	10	10	10			10
1E-4	48					10	10	10			10
1E-5	59					54	10	10			10
1E-6	93							84			109
1E-7											
1E-8											

Leakage - 23 ± 2 °C / 20 bar

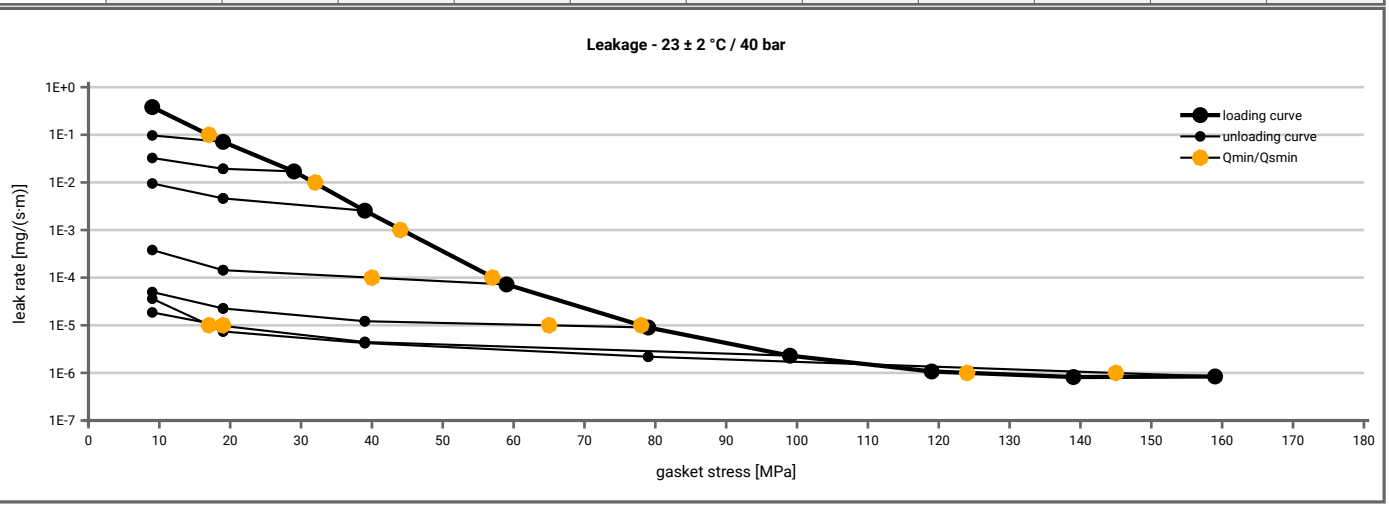


Note: the content of darkened cells was not determined respectively is unnecessary	Rev.-No.: **2**	Creation date of this sheet: **2016-08-26**

Manufacturer address	Garlock GmbH, Falkenweg 1, 41468 Neuss, DE	According to DIN EN 13555 2014-7
Product name	BLUE-GARD© 3000	
Product dimensions	92 x 49 x 2 mm (DIN EN 1514-1 1997-8)	

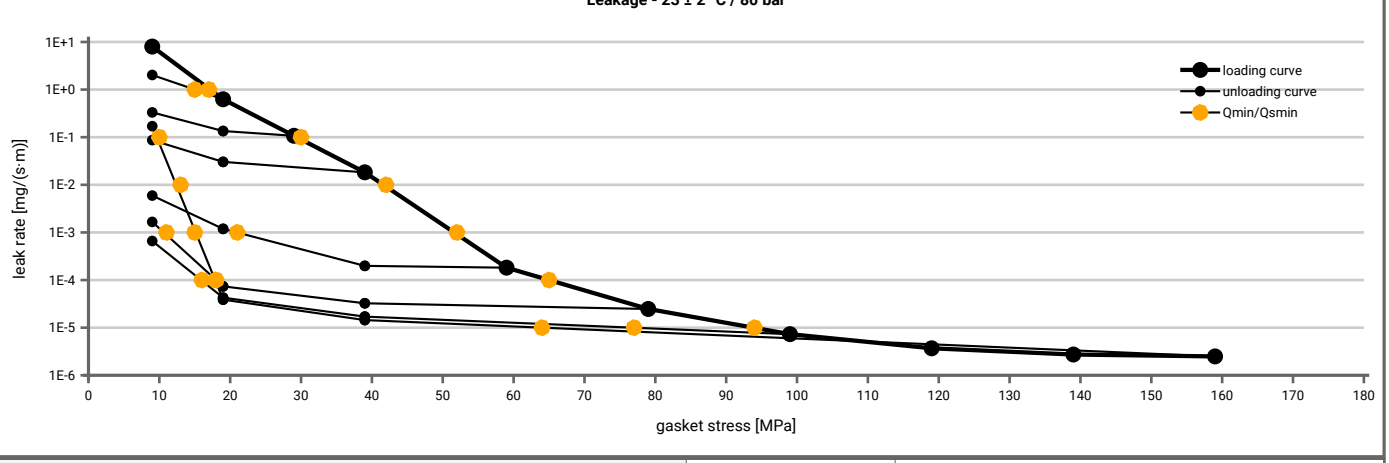
Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 40 bar (T = 23 ± 2 °C)

L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]									
		Q_A = 9.7 [MPa]	Q_A = 20 [MPa]	Q_A = 30 [MPa]	Q_A = 40 [MPa]	Q_A = 60 [MPa]	Q_A = 80 [MPa]	Q_A = 100 [MPa]	Q_A = 120 [MPa]	Q_A = 140 [MPa]	Q_A = 160 [MPa]
1E-0	10		10	10	10	10	10	10			10
1E-1	18		10	10	10	10	10	10			10
1E-2	33				10	10	10	10			10
1E-3	45					10	10	10			10
1E-4	58					41	10	10			10
1E-5	79						65	19			18
1E-6	125										145
1E-7											
1E-8											



Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 80 bar (T = 23 ± 2 °C)

L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]									
		Q_A = 9.7 [MPa]	Q_A = 20 [MPa]	Q_A = 30 [MPa]	Q_A = 40 [MPa]	Q_A = 60 [MPa]	Q_A = 80 [MPa]	Q_A = 100 [MPa]	Q_A = 120 [MPa]	Q_A = 140 [MPa]	Q_A = 160 [MPa]
1E+1	10		10	10	10	10	10	10			10
1E-0	18		16	10	10	10	10	10			10
1E-1	30				10	10	10	10			10
1E-2	42					10	10	10			13
1E-3	52					22	11	10			16
1E-4	66						19	17			19
1E-5	94							77			65
1E-6											
1E-7											
1E-8											

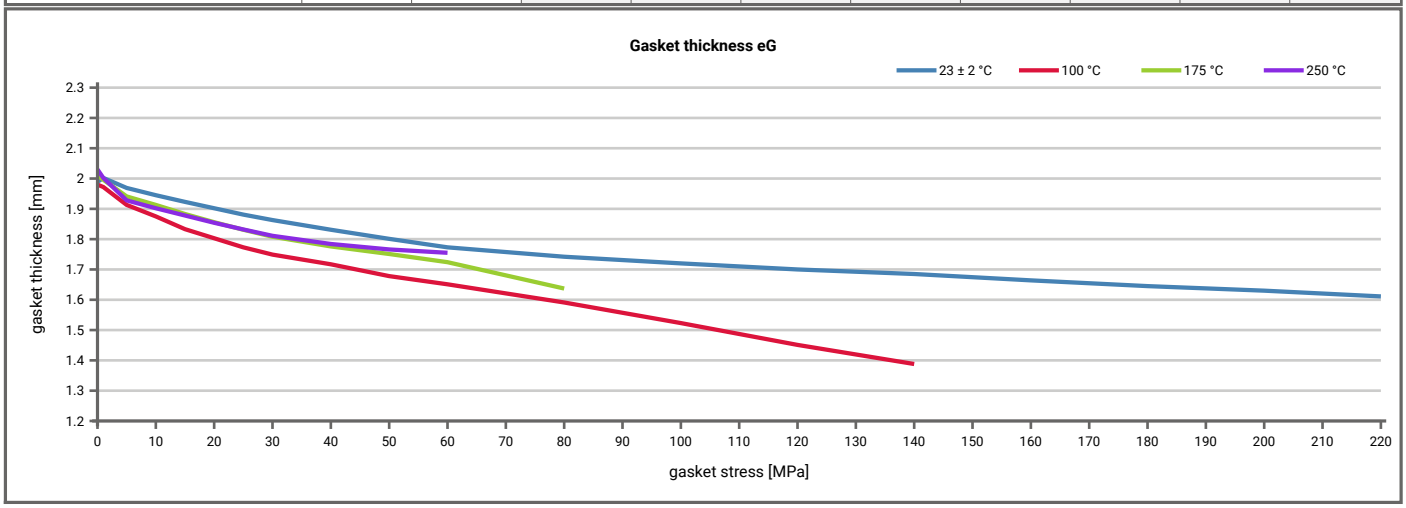


Note: the content of darkened cells was not determined respectively is unnecessary | Rev.-No.: **2** | Creation date of this sheet: **2016-08-26**

Manufacturer address	Garlock GmbH, Falkenweg 1, 41468 Neuss, DE	According to **DIN EN 13555 2014-7**
Product name	BLUE-GARD© 3000	
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 [175 °C]**		**Temperature 3 [250 °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]	0.92	21	0.73	68	0.65	89	0.54	117		
Stress level 2 [50 MPa]	0.95	23	0.79	88	0.67	138	0.69	130		
P_{QR} and Δe_{Gc} at maximum gasket stress to be applied Q_{smax}										
P_{QR} at Q_{smax}	0.98	37	0.80	235	0.76	161	0.69	156		
Q_{smax}	220 MPa		140 MPa		80 MPa		60 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 [175 °C]**		**Temperature 3 [250 °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	1.989	0	1.980	0	2.010	0	2.030		
1	0	2.002	0	1.972	0	1.996	0	2.002		
5	602	1.969	467	1.913	1075	1.941	1034	1.928		
10	840	1.945	600	1.875	644	1.913	686	1.902		
15	951	1.923	650	1.833	778	1.883	937	1.878		
20	983	1.902	872	1.803	905	1.856	960	1.854		
25	1120	1.881	895	1.773	1117	1.831	1243	1.832		
30	1234	1.863	1172	1.749	1262	1.808	1402	1.811		
40	1597	1.831	2022	1.717	1786	1.776	1975	1.784		
50	1815	1.801	2017	1.678	2542	1.751	2798	1.766		
60	2011	1.773	2877	1.651	3142	1.724	3772	1.755		
80	3401	1.742	3945	1.591	3317	1.637				
100	4500	1.720	4237	1.523						
120	5041	1.700	3880	1.451						
140	6209	1.685	4359	1.388						
160	6031	1.664								
180	5782	1.645								
200	7415	1.630								
220	7891	1.611								



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