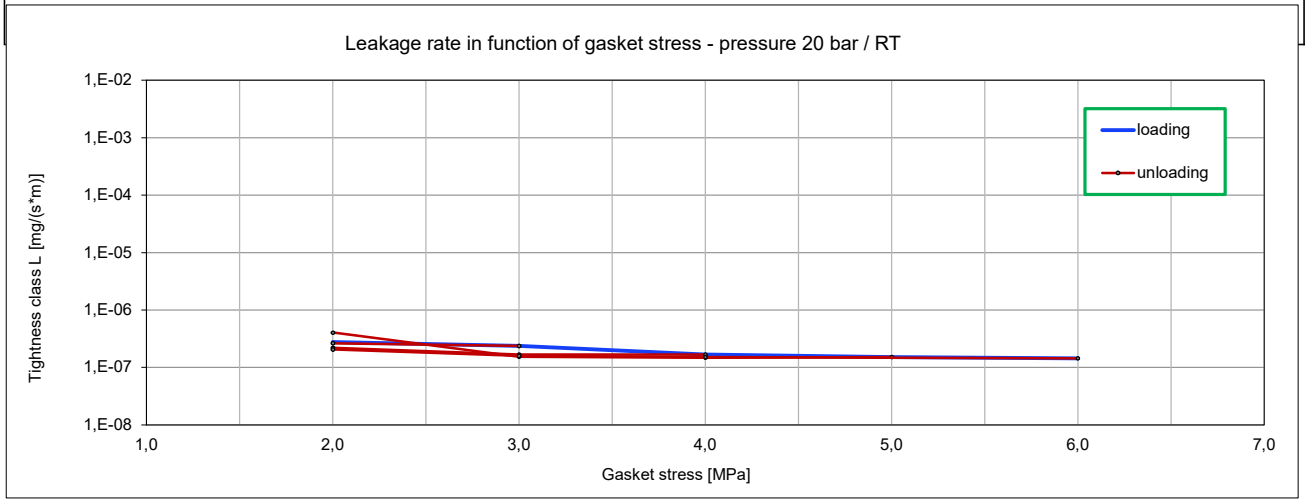
LABORATORY OF SEALING MATERIALS
43-382 Bielsko-Biała, ul. Szyprów 17
tel. +48 33 8184133 e-mail: lbmu@spetech.com.pl www.laboratory.spetech.eu

Company	**SPETECH sp. z o.o.**		
Gasket Type	**SPETOGUM® ELE 10 FKM**		
Dimensions [mm]	**88 x 49 x 8**		
Stiffness (kN/mm)	**500**		
Calculation type EN 1591-1	**a) flat gasket;**	**EN 1514-1**	**IBC**
Notes:			

Factors acc. to EN 13555 to use in calculation standard EN 1591-1:2009/ :2013

Minimum level of surface pressure required for leakage rate class L on assembly Qmin/L and after off-loading QSmin/L at room temperature (RT)

Internal pressure [bar]	**20**											
L [mg/(s*m)]	$Q_{min/L}$ [MPa]	$Q_{Smin/L}$ [MPa] for effective gasket stress										
		Q_A = 3 [MPa]	Q_A = 4 [MPa]	Q_A = 5 [MPa]	Q_A = 6 [MPa]							
10^{-2}	2	2	2	2	2							
10^{-3}	2	2	2	2	2							
10^{-4}	2	2	2	2	2							
10^{-5}	2	2	2	2	2							
10^{-6}	2	2	2	2	2							
10^{-7}												
10^{-8}												

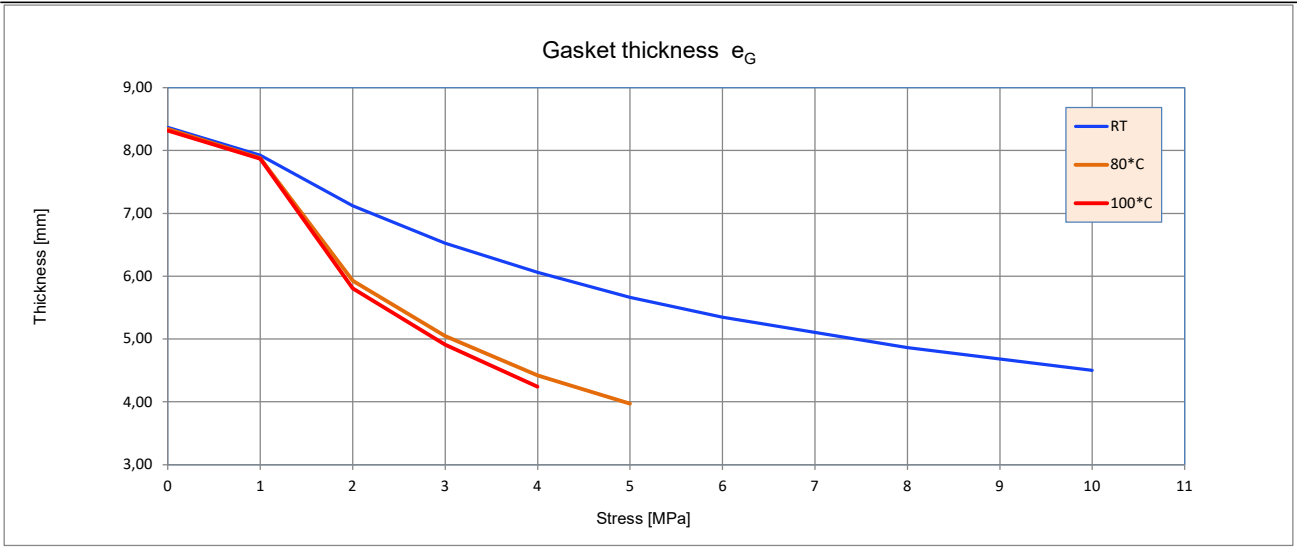


RT						
Gasket stress [MPa]	Unloading modulus of elasticity **EG**	Gasket or sealing element thickness e_G	Creep relaxation factor P_{QR}	Gasket thickness change due to creep Δe_{Gc}	Maximum surface pressure Q_{smax}	Static friction factor μ_G
	[MPa]	[mm]	[-]	[mm]	[MPa]	[-]
0		8,368				
1		7,924				
2	25,2	7,119				
3	29,5	6,523	0,69	0,008		
4	38,9	6,059	0,64	0,012	10	* 0,36
5	48,9	5,664	0,59	0,017		
6	61,2	5,351				
8	89,9	4,866				
10	124,9	4,504	0,49	0,043		

80*C						
Gasket stress [MPa]	Unloading modulus of elasticity EG	Gasket or sealing element thickness e_G	Creep relaxation factor P_{QR}	Gasket thickness change due to creep Δe_{Gc}	Maximum surface pressure Q_{smax}	Static friction factor μ_G
	[MPa]	[mm]	[-]	[mm]	[MPa]	[-]
0		8,345				
1		7,881				
2	17,0	5,929				
3	23,5	5,047	0,39	0,015	5	* 0,24
4	31,2	4,421	0,36	0,021		
5	41,0	3,973	0,38	0,026		

100*C						
Gasket stress [MPa]	Unloading modulus of elasticity EG	Gasket or sealing element thickness e_G	Creep relaxation factor P_{QR}	Gasket thickness change due to creep Δe_{Gc}	Maximum surface pressure Q_{smax}	Static friction factor μ_G
	[MPa]	[mm]	[-]	[mm]	[MPa]	[-]
0		8,320				
1		7,870				
2	15,6	5,804			4	* 0,22
3	20,7	4,912	0,34	0,017		
4	27,3	4,243	0,34	0,022		

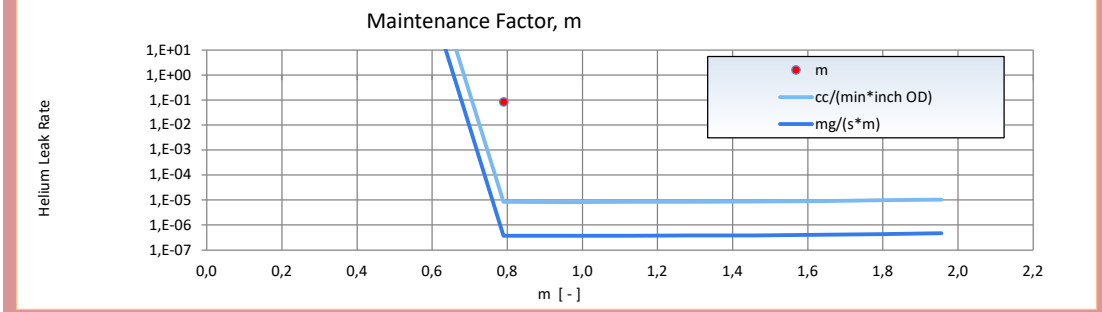
* The value determined for the thickness 5 mm

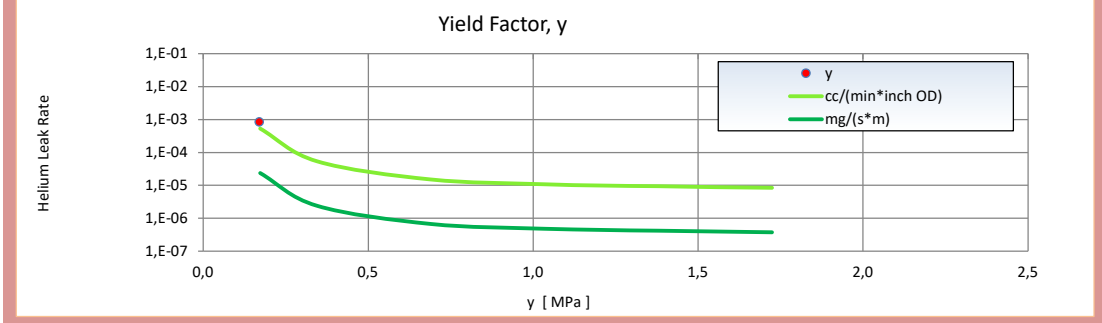


Factors acc. to:

ASTM F3149-15 Determining the Maintenance Factor (m) and Yield Factor (y)

m	y [psi]	y [MPa]
0,79	25	0,17





σmax - see maximal applicable gasket stress Qsmax acc. EN 1591-1:2009/:2013

Factors acc. to:

EN 61340-2-3 Electrostatics - Part 2-3: Methods of test for determining the resistance and resistivity of solid planar materials used to avoid electrostatic charge accumulation

Surface resistance R_s at U=100V	[Ω]	=	1,24E+10
Volume resistance R_v at U=100V	[Ω]	=	9,03E+09
Surface resistivity ρ_s at U=100V	[Ω]	=	1,26E+11
Volume resistivity ρ_v at U=100V	[Ωm]	=	1,68E+09