

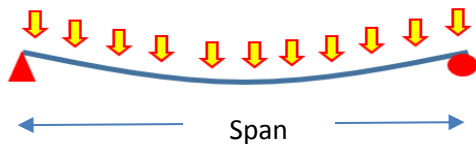
Designing for Distributed Loading

Symonite HD

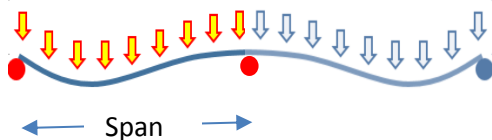
The following graphical and tabulated data enables accurate and quick determination of maximum deflections of spans of Symonite panelling resulting from uniformly distributed loading such as wind loading, gravity loading or combinations of same.

Support Conditions

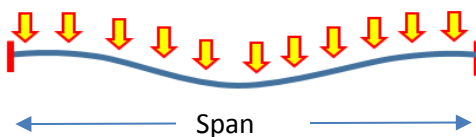
1. Opposite edges simply supported. Supported edges free to rotate. No bending moment at the supports.



2. One edge simply supported, free to rotate having no bending moment. Opposite edge fixed, applied bending moment from the support prevents rotation. This case is typical of a centrally supported panel.



3. Opposite edges fixed and not free to rotate. The applied bending moment from the supports to both supported edges prevents rotation.



Spans

Maximum deflections are given for the range of spans 400 mm to 1200 mm in 10 mm increments.

Uniformly Distributed Load

The uniformly distributed load is expressed as a pressure in kPa, with maximum deflections given for the range 0.5 kPa to 6.0 kPa in increments of 0.5 kPa.

Aluminium Skin Stress

Maximum deflections are given only for those combinations of span length, support conditions and uniformly distributed loading that result in stress in the aluminium alloy skin less than or equal to 71 MPa.

Limiting the aluminium skin stress to 71MPa achieves a safety factor of at least 1.5 on that bending moment that would initiate yielding (permanent bending) of the panel.

WARNING – ACCEPTABLE STRESSES AND DEFLECTIONS

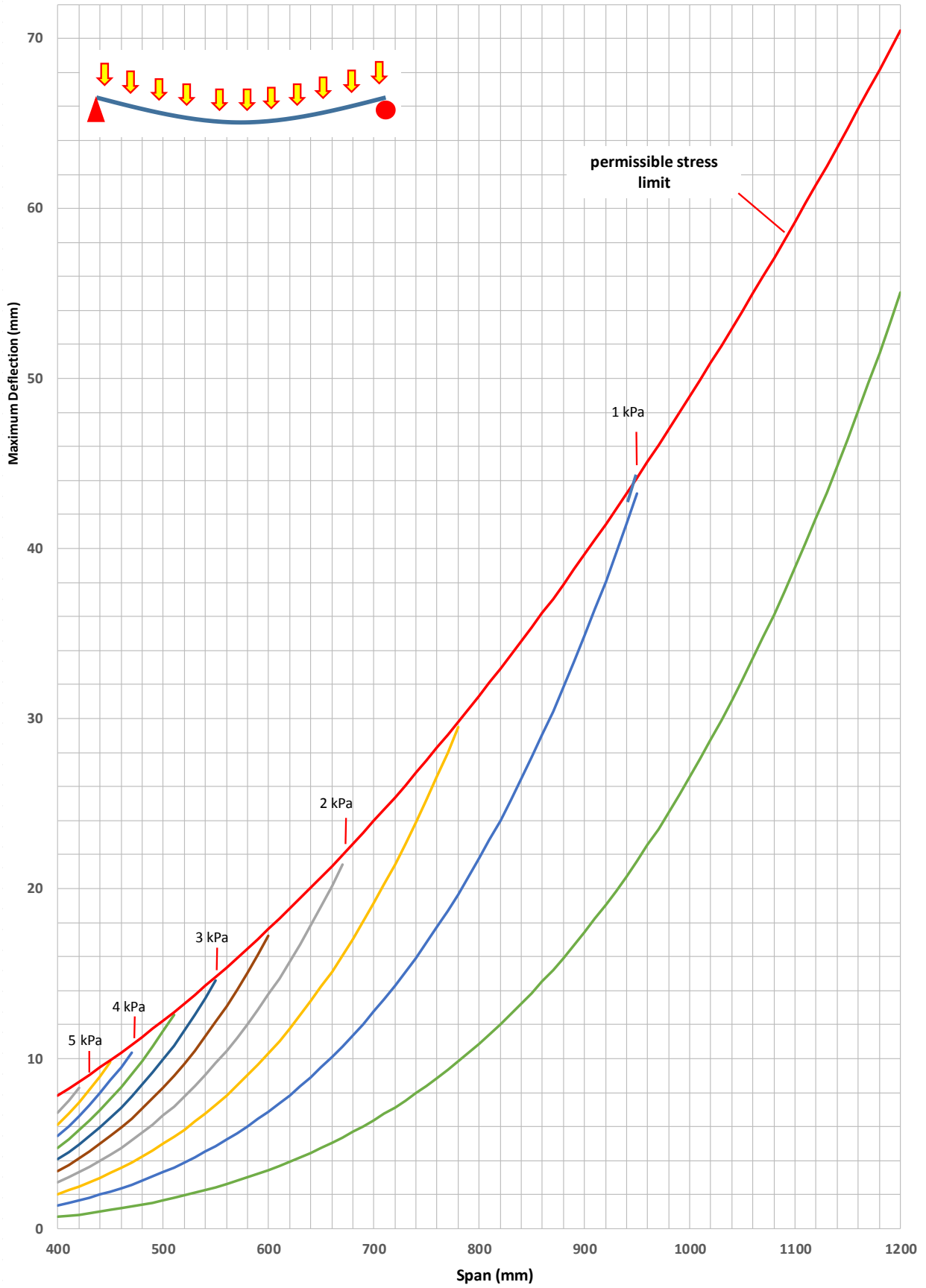
Please note that the following graphical and tabular data is given for guidance only, it is the designer's responsibility to ensure that the design satisfies the requirements of the regulatory authorities.

Consultant:

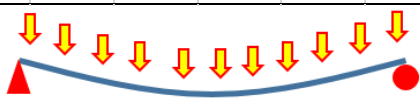
The following graphical and tabular data has been produced by, and is based on laboratory testing carried out by, Hugh Stark BSc PhD FIMechE CEng FIEAust CPEng RPEQ.

For detailed wind load and stress reports please contact Symonite.

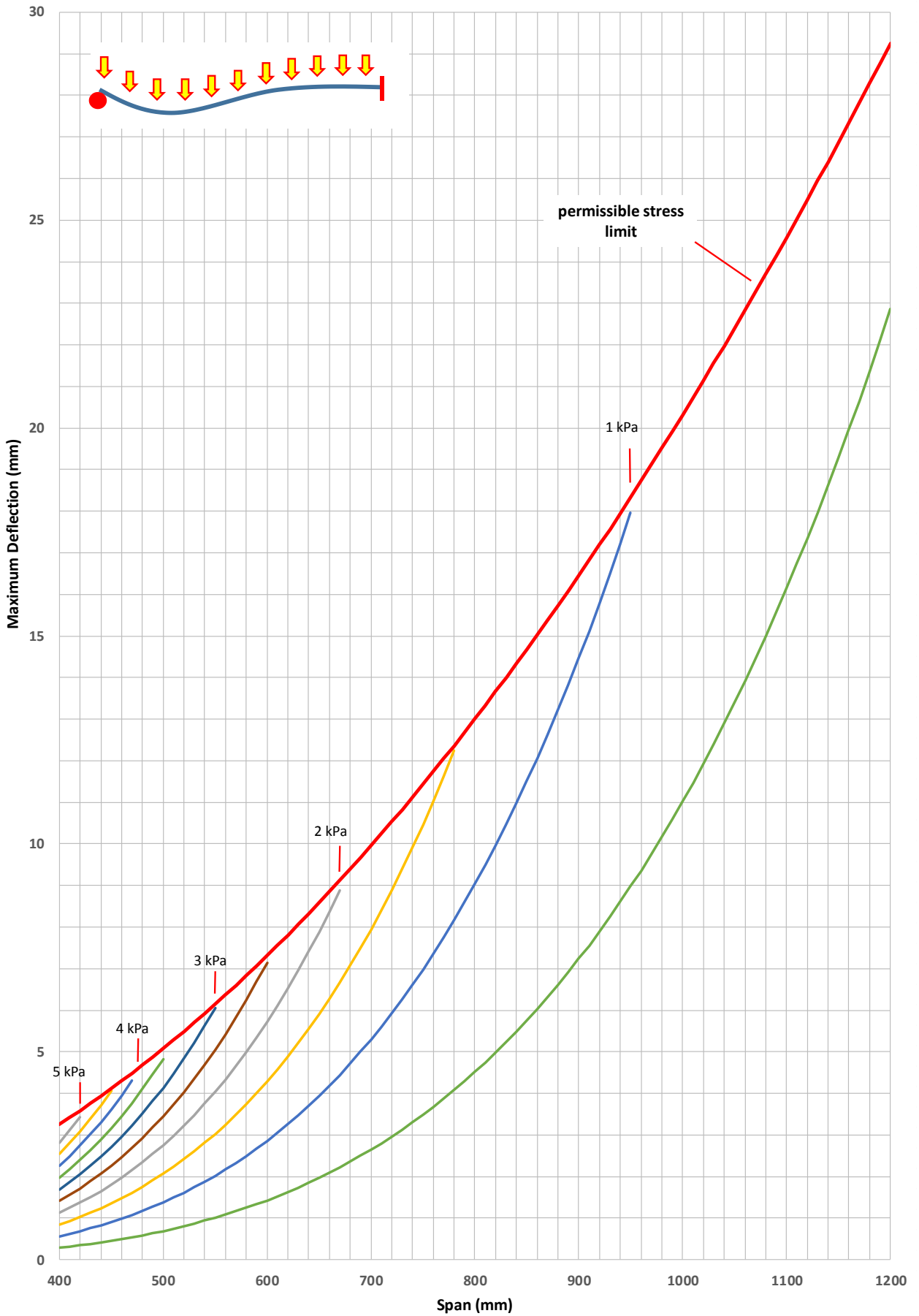
Nominal: 4 mm Symonite with 0.5 mm thick aluminium skins
 Single span: simple support / simple support



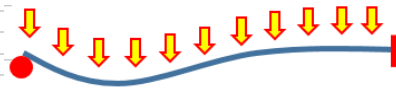
4		mm	Nominal thickness	SYMONITE PANEL				Single span: simple support / simple support					Aluminium	
Panel thickness ≥		3.909	mm	Measured plate stiffness 'D' =				245,196	Nmm	E =		68,900	MPa	
Thickness of aluminium skins ≥		0.514	mm	Aluminium permissible stress =				71	MPa	Poisson's Ratio =		0.33		
Panel weight =		6.66	kg/m ²	Maximum deflection (mm)									Defin.	
Span (mm)	Pressure (kPa)												at max. stress	
	6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1	0.5		
400		7.48	6.80	6.12	5.44	4.76	4.08	3.40	2.72	2.04	1.36	0.68	7.83	
410			7.50	6.75	6.00	5.25	4.50	3.75	3.00	2.25	1.50	0.75	8.23	
420			8.26	7.44	6.61	5.78	4.96	4.13	3.30	2.48	1.65	0.83	8.63	
430				8.17	7.26	6.35	5.45	4.54	3.63	2.72	1.82	0.91	9.05	
440				8.96	7.96	6.97	5.97	4.98	3.98	2.99	1.99	1.00	9.47	
450				9.80	8.71	7.62	6.53	5.44	4.36	3.27	2.18	1.09	9.91	
460					9.51	8.32	7.13	5.94	4.76	3.57	2.38	1.19	10.36	
470					10.37	9.07	7.77	6.48	5.18	3.89	2.59	1.30	10.81	
480						9.87	8.46	7.05	5.64	4.23	2.82	1.41	11.28	
490						10.71	9.18	7.65	6.12	4.59	3.06	1.53	11.75	
500						11.62	9.96	8.30	6.64	4.98	3.32	1.66	12.23	
510						12.57	10.78	8.98	7.19	5.39	3.59	1.80	12.73	
520							11.65	9.71	7.77	5.82	3.88	1.94	13.23	
530							12.57	10.48	8.38	6.29	4.19	2.10	13.75	
540							13.55	11.29	9.03	6.77	4.52	2.26	14.27	
550							14.58	12.15	9.72	7.29	4.86	2.43	14.80	
560								13.06	10.44	7.83	5.22	2.61	15.35	
570								14.01	11.21	8.41	5.61	2.80	15.90	
580								15.02	12.02	9.01	6.01	3.00	16.46	
590								16.09	12.87	9.65	6.43	3.22	17.04	
600								17.21	13.76	10.32	6.88	3.44	17.62	
610									14.71	11.03	7.35	3.68	18.21	
620									15.69	11.77	7.85	3.92	18.81	
630									16.73	12.55	8.37	4.18	19.42	
640									17.82	13.36	8.91	4.45	20.05	
650									18.96	14.22	9.48	4.74	20.68	
660									20.15	15.11	10.08	5.04	21.32	
670									21.40	16.05	10.70	5.35	21.97	
680										17.03	11.35	5.68	22.63	
690										18.06	12.04	6.02	23.30	
700										19.13	12.75	6.38	23.98	
710										20.24	13.49	6.75	24.67	
720										21.41	14.27	7.14	25.37	
730										22.62	15.08	7.54	26.08	
740										23.89	15.92	7.96	26.80	
750										25.20	16.80	8.40	27.53	
760										26.57	17.72	8.86	28.27	
770										28.00	18.67	9.33	29.02	
780										29.48	19.66	9.83	29.77	
790											20.68	10.34	30.54	
800											21.75	10.88	31.32	
810											22.86	11.43	32.11	
820											24.01	12.00	32.91	
830											25.20	12.60	33.71	
840											26.44	13.22	34.53	
850											27.72	13.86	35.36	
860											29.05	14.52	36.20	
870											30.42	15.21	37.04	
880											31.85	15.92	37.90	
890											33.32	16.66	38.76	
900											34.84	17.42	39.64	
910											36.42	18.21	40.53	
920											38.04	19.02	41.42	
930											39.72	19.86	42.33	
940											41.46	20.73	43.24	
950											43.25	21.63	44.17	
960											22.55	12.55	45.10	
970											23.51	13.21	46.05	
980											24.49	13.90	47.00	
990											25.51	14.61	47.97	
1000											26.55	15.34	48.94	
1010											27.63	16.09	49.92	
1020											28.74	16.86	50.92	
1030											29.88	17.66	51.92	
1040											31.06	18.48	52.93	
1050											32.27	19.32	53.96	
1060											33.52	20.17	54.99	
1070											34.80	21.04	56.03	
1080											36.12	21.92	57.08	
1090											37.48	22.82	58.14	
1100											38.87	23.74	59.22	
1110											40.31	24.67	60.30	
1120											41.78	25.62	61.39	
1130											43.29	26.59	62.49	
1140											44.85	27.58	63.60	
1150											46.44	28.59	64.72	
1160											48.08	29.62	65.85	
1170											49.76	30.67	66.99	
1180											51.48	31.74	68.14	
1190											53.25	32.82	69.30	
1200											55.06	33.92	70.47	



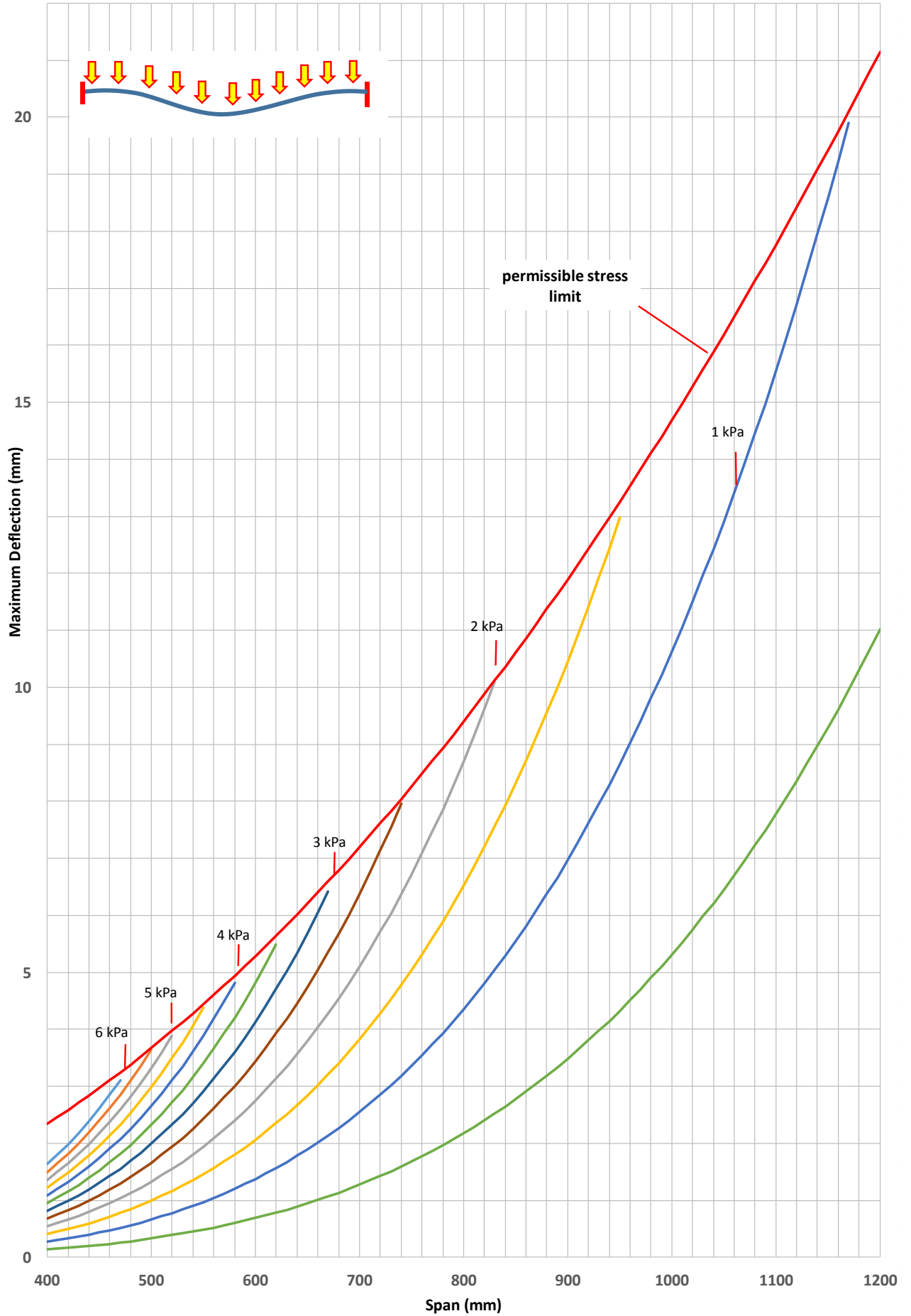
Nominal: 4 mm Symonite with 0.5 mm thick aluminium skins
 Single span: simple support / fixed support



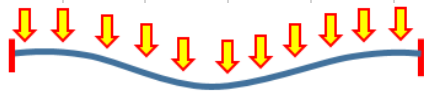
4		mm	Nominal thickness	SYMONITE PANEL			Single span: simple support / fixed support							Aluminium
		Panel thickness ≥	3.909	mm			Measured plate stiffness 'D' =		245,196	Nmm			E =	68,900 MPa
		Thickness of aluminium skins ≥	0.514	mm			Aluminium permissible stress =		71	MPa			Poisson's Ratio =	0.33
		Panel weight =	6.66	kg/m ²										
Span (mm)	Maximum deflection (mm)												Defn. at max. stress	
	6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1	0.5		
400		3.10	2.82	2.54	2.26	1.98	1.69	1.41	1.13	0.85	0.56	0.28	3.25	
410			3.11	2.80	2.49	2.18	1.87	1.56	1.25	0.93	0.62	0.31	3.42	
420			3.43	3.09	2.74	2.40	2.06	1.71	1.37	1.03	0.69	0.34	3.58	
430				3.39	3.01	2.64	2.26	1.88	1.51	1.13	0.75	0.38	3.76	
440				3.72	3.31	2.89	2.48	2.07	1.65	1.24	0.83	0.41	3.93	
450				4.07	3.62	3.16	2.71	2.26	1.81	1.36	0.90	0.45	4.11	
460					3.95	3.45	2.96	2.47	1.97	1.48	0.99	0.49	4.30	
470					4.30	3.77	3.23	2.69	2.15	1.61	1.08	0.54	4.49	
480						4.10	3.51	2.93	2.34	1.76	1.17	0.59	4.68	
490						4.45	3.81	3.18	2.54	1.91	1.27	0.64	4.88	
500						4.82	4.13	3.44	2.76	2.07	1.38	0.69	5.08	
510							4.47	3.73	2.98	2.24	1.49	0.75	5.28	
520							4.84	4.03	3.22	2.42	1.61	0.81	5.49	
530							5.22	4.35	3.48	2.61	1.74	0.87	5.71	
540							5.62	4.69	3.75	2.81	1.87	0.94	5.92	
550							6.05	5.04	4.03	3.03	2.02	1.01	6.15	
560								5.42	4.34	3.25	2.17	1.08	6.37	
570								5.82	4.65	3.49	2.33	1.16	6.60	
580								6.24	4.99	3.74	2.49	1.25	6.83	
590								6.68	5.34	4.01	2.67	1.34	7.07	
600								7.14	5.71	4.29	2.86	1.43	7.31	
610									6.10	4.58	3.05	1.53	7.56	
620									6.51	4.89	3.26	1.63	7.81	
630									6.95	5.21	3.47	1.74	8.06	
640									7.40	5.55	3.70	1.85	8.32	
650									7.87	5.90	3.94	1.97	8.58	
660									8.37	6.27	4.18	2.09	8.85	
670									8.88	6.66	4.44	2.22	9.12	
680										7.07	4.71	2.36	9.39	
690										7.50	5.00	2.50	9.67	
700										7.94	5.29	2.65	9.96	
710										8.40	5.60	2.80	10.24	
720										8.89	5.92	2.96	10.53	
730										9.39	6.26	3.13	10.83	
740										9.92	6.61	3.31	11.13	
750										10.46	6.98	3.49	11.43	
760										11.03	7.35	3.68	11.73	
770										11.62	7.75	3.87	12.05	
780										12.24	8.16	4.08	12.36	
790											8.59	4.29	12.68	
800											9.03	4.51	13.00	
810											9.49	4.74	13.33	
820											9.97	4.98	13.66	
830											10.46	5.23	14.00	
840											10.98	5.49	14.34	
850											11.51	5.75	14.68	
860											12.06	6.03	15.03	
870											12.63	6.31	15.38	
880											13.22	6.61	15.73	
890											13.83	6.92	16.09	
900											14.46	7.23	16.46	
910											15.12	7.56	16.82	
920											15.79	7.90	17.20	
930											16.49	8.25	17.57	
940											17.21	8.61	17.95	
950											17.96	8.98	18.34	
960												9.36	18.72	
970												9.76	19.12	
980												10.17	19.51	
990												10.59	19.91	
1000												11.02	20.32	
1010												11.47	20.72	
1020												11.93	21.14	
1030												12.41	21.55	
1040												12.89	21.97	
1050												13.40	22.40	
1060												13.92	22.83	
1070												14.45	23.26	
1080												15.00	23.70	
1090												15.56	24.14	
1100												16.14	24.58	
1110												16.73	25.03	
1120												17.34	25.48	
1130												17.97	25.94	
1140												18.62	26.40	
1150												19.28	26.87	
1160												19.96	27.34	
1170												20.66	27.81	
1180												21.37	28.29	
1190												22.10	28.77	
1200												22.86	29.26	



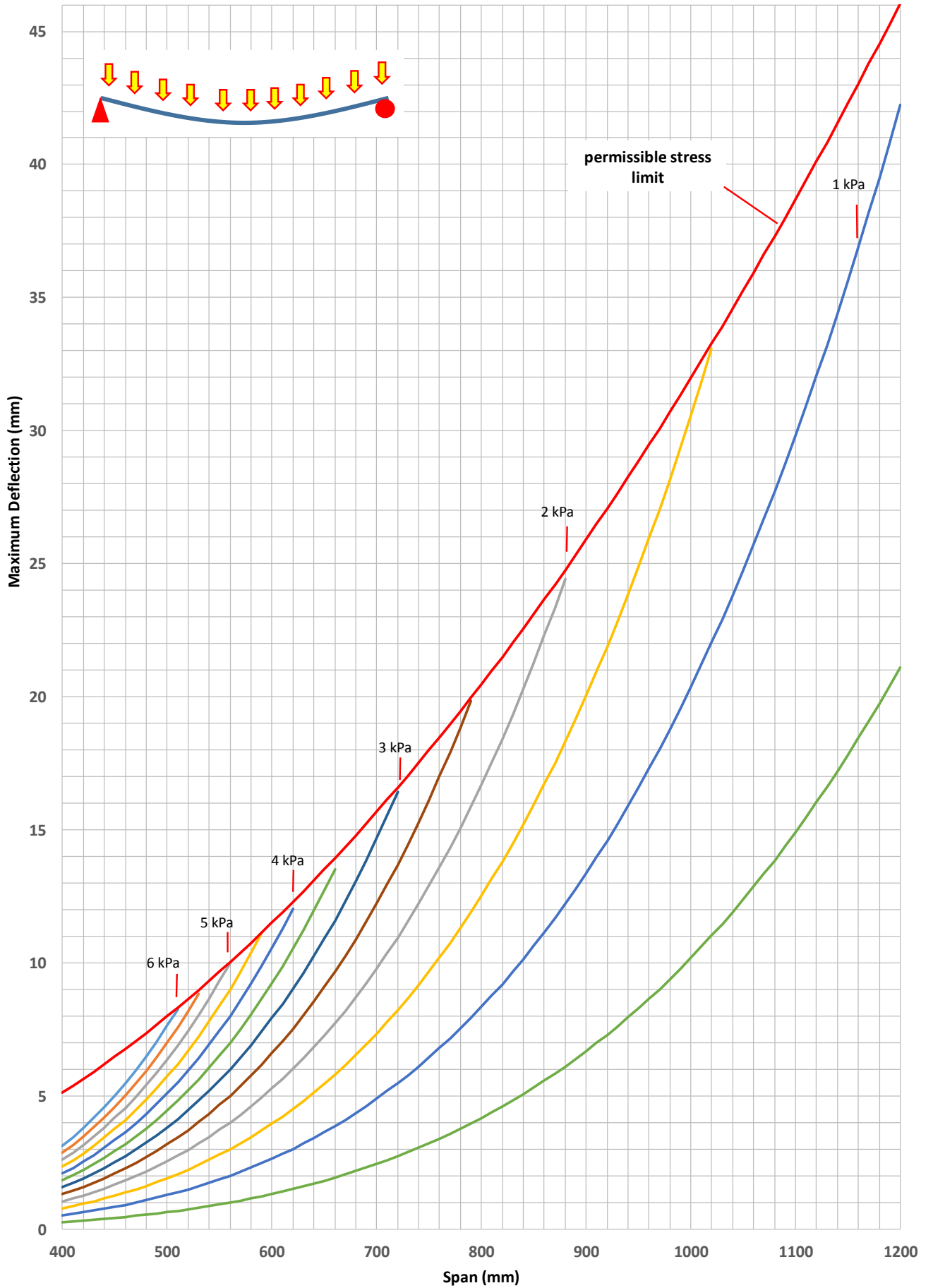
Nominal: 4 mm Symonite with 0.5 mm thick aluminium skins
 Single span: fixed support / fixed support



4		mm	Nominal thickness	SYMONITE PANEL					Single span: fixed support / fixed support						
		Panel thickness ≥	3.909	mm						Measured plate stiffness 'D' =	245,196	Nmm	Aluminium		
		Thickness of aluminium skins ≥	0.514	mm						Aluminium permissible stress =	71	MPa	E =		68,900 MPa
		Panel weight =	6.66	kg/m ²								Poisson's Ratio =		0.33	
Span (mm)	Maximum deflection (mm)												Defn. at max. stress		
	6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1	0.5			
400	1.63	1.50	1.36	1.22	1.09	0.95	0.82	0.68	0.54	0.41	0.27	0.14	2.35		
410	1.80	1.65	1.50	1.35	1.20	1.05	0.90	0.75	0.60	0.45	0.30	0.15	2.47		
420	1.98	1.82	1.65	1.49	1.32	1.16	0.99	0.83	0.66	0.50	0.33	0.17	2.59		
430	2.18	2.00	1.82	1.63	1.45	1.27	1.09	0.91	0.73	0.54	0.36	0.18	2.71		
440	2.39	2.19	1.99	1.79	1.59	1.39	1.19	1.00	0.80	0.60	0.40	0.20	2.84		
450	2.61	2.40	2.18	1.96	1.74	1.52	1.31	1.09	0.87	0.65	0.44	0.22	2.97		
460	2.85	2.62	2.38	2.14	1.90	1.66	1.43	1.19	0.95	0.71	0.48	0.24	3.11		
470	3.11	2.85	2.59	2.33	2.07	1.81	1.55	1.30	1.04	0.78	0.52	0.26	3.24		
480		3.10	2.82	2.54	2.26	1.97	1.69	1.41	1.13	0.85	0.56	0.28	3.38		
490		3.37	3.06	2.76	2.45	2.14	1.84	1.53	1.22	0.92	0.61	0.31	3.53		
500		3.65	3.32	2.99	2.66	2.32	1.99	1.66	1.33	1.00	0.66	0.33	3.67		
510			3.59	3.23	2.87	2.51	2.16	1.80	1.44	1.08	0.72	0.36	3.82		
520			3.88	3.49	3.11	2.72	2.33	1.94	1.55	1.16	0.78	0.39	3.97		
530				3.77	3.35	2.93	2.51	2.10	1.68	1.26	0.84	0.42	4.12		
540				4.06	3.61	3.16	2.71	2.26	1.81	1.35	0.90	0.45	4.28		
550				4.37	3.89	3.40	2.92	2.43	1.94	1.46	0.97	0.49	4.44		
560					4.18	3.66	3.13	2.61	2.09	1.57	1.04	0.52	4.60		
570					4.48	3.92	3.36	2.80	2.24	1.68	1.12	0.56	4.77		
580					4.81	4.21	3.61	3.00	2.40	1.80	1.20	0.60	4.94		
590						4.50	3.86	3.22	2.57	1.93	1.29	0.64	5.11		
600						4.82	4.13	3.44	2.75	2.06	1.38	0.69	5.29		
610						5.15	4.41	3.68	2.94	2.21	1.47	0.74	5.46		
620						5.49	4.71	3.92	3.14	2.35	1.57	0.78	5.64		
630							5.02	4.18	3.35	2.51	1.67	0.84	5.83		
640							5.35	4.45	3.56	2.67	1.78	0.89	6.01		
650							5.69	4.74	3.79	2.84	1.90	0.95	6.20		
660							6.05	5.04	4.03	3.02	2.02	1.01	6.40		
670							6.42	5.35	4.28	3.21	2.14	1.07	6.59		
680								5.68	4.54	3.41	2.27	1.14	6.79		
690								6.02	4.81	3.61	2.41	1.20	6.99		
700								6.38	5.10	3.83	2.55	1.28	7.19		
710								6.75	5.40	4.05	2.70	1.35	7.40		
720								7.14	5.71	4.28	2.85	1.43	7.61		
730								7.54	6.03	4.52	3.02	1.51	7.82		
740								7.96	6.37	4.78	3.18	1.59	8.04		
750									6.72	5.04	3.36	1.68	8.26		
760									7.09	5.31	3.54	1.77	8.48		
770									7.47	5.60	3.73	1.87	8.70		
780									7.86	5.90	3.93	1.97	8.93		
790									8.27	6.21	4.14	2.07	9.16		
800									8.70	6.53	4.35	2.18	9.40		
810									9.14	6.86	4.57	2.29	9.63		
820									9.60	7.20	4.80	2.40	9.87		
830									10.08	7.56	5.04	2.52	10.11		
840										7.93	5.29	2.64	10.36		
850										8.32	5.54	2.77	10.61		
860										8.71	5.81	2.90	10.86		
870										9.13	6.08	3.04	11.11		
880										9.55	6.37	3.18	11.37		
890										10.00	6.66	3.33	11.63		
900										10.45	6.97	3.48	11.89		
910										10.92	7.28	3.64	12.16		
920										11.41	7.61	3.80	12.43		
930										11.92	7.94	3.97	12.70		
940										12.44	8.29	4.15	12.97		
950										12.98	8.65	4.33	13.25		
960											9.02	4.51	13.53		
970											9.40	4.70	13.81		
980											9.80	4.90	14.10		
990											10.20	5.10	14.39		
1000											10.62	5.31	14.68		
1010											11.05	5.53	14.98		
1020											11.50	5.75	15.27		
1030											11.95	5.98	15.58		
1040											12.42	6.21	15.88		
1050											12.91	6.45	16.19		
1060											13.41	6.70	16.50		
1070											13.92	6.96	16.81		
1080											14.45	7.22	17.12		
1090											14.99	7.50	17.44		
1100											15.55	7.77	17.77		
1110											16.12	8.06	18.09		
1120											16.71	8.36	18.42		
1130											17.32	8.66	18.75		
1140											17.94	8.97	19.08		
1150											18.58	9.29	19.42		
1160											19.23	9.62	19.76		
1170											19.90	9.95	20.10		
1180												10.30	20.44		
1190												10.65	20.79		
1200												11.01	21.14		



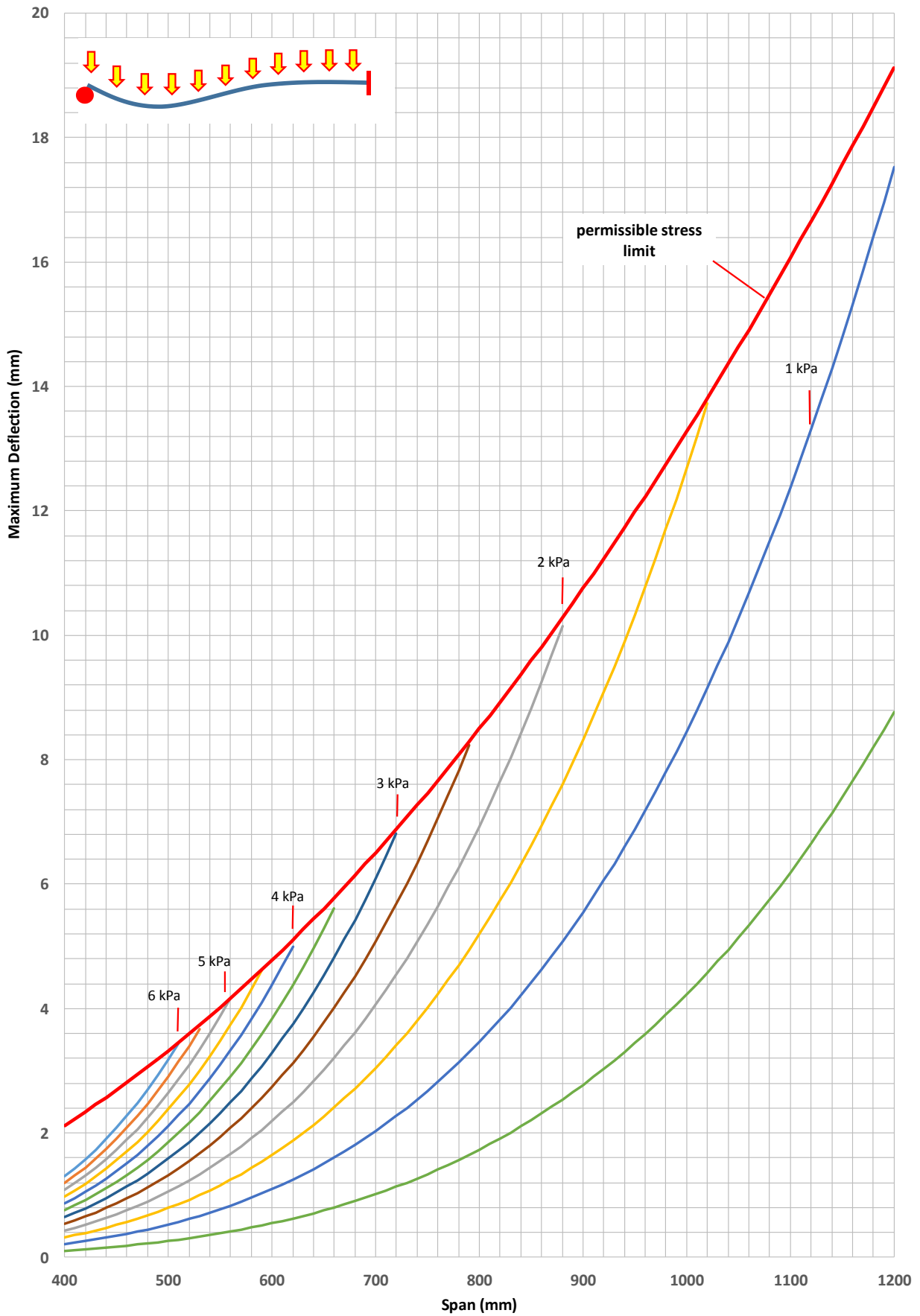
Nominal: 6 mm Symonite with 0.5 mm thick aluminium skins
 Single span: simple support / simple support



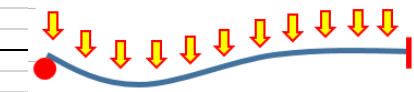
6		mm		Nominal thickness		SYMONITE PANEL		Single span: simple support / simple support																			
		Panel thickness ≥		5.982		mm		Measured plate stiffness 'D' =		639,243		Nmm		Aluminium													
		Thickness of aluminium skins ≥		0.528		mm		Aluminium permissible stress =		71		MPa		E = 68,900 MPa													
		Panel weight =		9.42		kg/m ²								Poisson's Ratio = 0.33													
								Maximum deflection (mm)					Defn.														
								Pressure (kPa)					at max.														
Span (mm)		6		5.5		5		4.5		4		3.5		3		2.5		2		1.5		1		0.5		stress	
400	3.13	2.87	2.61	2.35	2.09	1.83	1.56	1.30	1.04	0.78	0.52	0.26	5.12														
410	3.45	3.17	2.88	2.59	2.30	2.01	1.73	1.44	1.15	0.86	0.58	0.29	5.38														
420	3.80	3.49	3.17	2.85	2.54	2.22	1.90	1.58	1.27	0.95	0.63	0.32	5.64														
430	4.18	3.83	3.48	3.13	2.79	2.44	2.09	1.74	1.39	1.04	0.70	0.35	5.91														
440	4.58	4.20	3.82	3.44	3.05	2.67	2.29	1.91	1.53	1.15	0.76	0.38	6.19														
450	5.01	4.59	4.18	3.76	3.34	2.92	2.51	2.09	1.67	1.25	0.84	0.42	6.48														
460	5.47	5.02	4.56	4.10	3.65	3.19	2.74	2.28	1.82	1.37	0.91	0.46	6.77														
470	5.96	5.47	4.97	4.47	3.98	3.48	2.98	2.48	1.99	1.49	0.99	0.50	7.06														
480	6.49	5.95	5.41	4.87	4.33	3.78	3.24	2.70	2.16	1.62	1.08	0.54	7.37														
490	7.05	6.46	5.87	5.28	4.70	4.11	3.52	2.94	2.35	1.76	1.17	0.59	7.68														
500	7.64	7.00	6.37	5.73	5.09	4.46	3.82	3.18	2.55	1.91	1.27	0.64	7.99														
510	8.27	7.58	6.89	6.20	5.51	4.82	4.13	3.45	2.76	2.07	1.38	0.69	8.32														
520		8.19	7.45	6.70	5.96	5.21	4.47	3.72	2.98	2.23	1.49	0.74	8.65														
530		8.84	8.04	7.23	6.43	5.63	4.82	4.02	3.21	2.41	1.61	0.80	8.98														
540			8.66	7.79	6.93	6.06	5.20	4.33	3.46	2.60	1.73	0.87	9.33														
550			9.32	8.39	7.46	6.52	5.59	4.66	3.73	2.80	1.86	0.93	9.67														
560			10.02	9.01	8.01	7.01	6.01	5.01	4.01	3.00	2.00	1.00	10.03														
570				9.68	8.60	7.53	6.45	5.38	4.30	3.23	2.15	1.08	10.39														
580				10.37	9.22	8.07	6.92	5.76	4.61	3.46	2.31	1.15	10.76														
590				11.11	9.87	8.64	7.40	6.17	4.94	3.70	2.47	1.23	11.13														
600					10.56	9.24	7.92	6.60	5.28	3.96	2.64	1.32	11.51														
610					11.28	9.87	8.46	7.05	5.64	4.23	2.82	1.41	11.90														
620					12.04	10.53	9.03	7.52	6.02	4.51	3.01	1.50	12.29														
630						11.23	9.63	8.02	6.42	4.81	3.21	1.60	12.69														
640						11.96	10.25	8.54	6.83	5.13	3.42	1.71	13.10														
650						12.73	10.91	9.09	7.27	5.45	3.64	1.82	13.51														
660						13.53	11.59	9.66	7.73	5.80	3.86	1.93	13.93														
670							12.31	10.26	8.21	6.16	4.10	2.05	14.36														
680							13.07	10.89	8.71	6.53	4.36	2.18	14.79														
690							13.85	11.54	9.23	6.93	4.62	2.31	15.23														
700							14.67	12.23	9.78	7.34	4.89	2.45	15.67														
710							15.53	12.94	10.35	7.76	5.18	2.59	16.12														
720							16.42	13.68	10.95	8.21	5.47	2.74	16.58														
730								14.46	11.57	8.68	5.78	2.89	17.04														
740								15.27	12.22	9.16	6.11	3.05	17.51														
750								16.11	12.89	9.67	6.44	3.22	17.99														
760								16.99	13.59	10.19	6.80	3.40	18.47														
770								17.90	14.32	10.74	7.16	3.58	18.96														
780								18.85	15.08	11.31	7.54	3.77	19.46														
790								19.83	15.87	11.90	7.93	3.97	19.96														
800									16.69	12.51	8.34	4.17	20.47														
810									17.54	13.15	8.77	4.38	20.98														
820									18.42	13.81	9.21	4.60	21.50														
830									19.33	14.50	9.67	4.83	22.03														
840									20.28	15.21	10.14	5.07	22.57														
850									21.27	15.95	10.63	5.32	23.11														
860									22.28	16.71	11.14	5.57	23.65														
870									23.34	17.50	11.67	5.83	24.21														
880									24.43	18.32	12.22	6.11	24.77														
890										19.17	12.78	6.39	25.33														
900										20.05	13.36	6.68	25.90														
910										20.95	13.97	6.98	26.48														
920										21.89	14.59	7.30	27.07														
930										22.86	15.24	7.62	27.66														
940										23.85	15.90	7.95	28.26														
950										24.89	16.59	8.30	28.86														
960										25.95	17.30	8.65	29.47														
970										27.05	18.03	9.02	30.09														
980										28.18	18.79	9.39	30.71														
990										29.35	19.57	9.78	31.34														
1000										30.55	20.37	10.18	31.98														
1010										31.79	21.20	10.60	32.62														
1020										33.07	22.05	11.02	33.27														
1030											22.93	11.46	33.93														
1040											23.83	11.91	34.59														
1050											24.76	12.38	35.26														
1060											25.72	12.86	35.93														
1070											26.70	13.35	36.61														
1080											27.71	13.86	37.30														
1090											28.75	14.38	38.00														
1100											29.82	14.91	38.70														
1110											30.92	15.46	39.40														
1120											32.05	16.03	40.12														
1130											33.21	16.61	40.84														
1140											34.40	17.20	41.56														
1150											35.63	17.81	42.29														
1160											36.88	18.44	43.03														
1170											38.17	19.08	43.78														
1180											39.49	19.75	44.53														
1190											40.85	20.42	45.29														
1200											42.24	21.12	46.05														



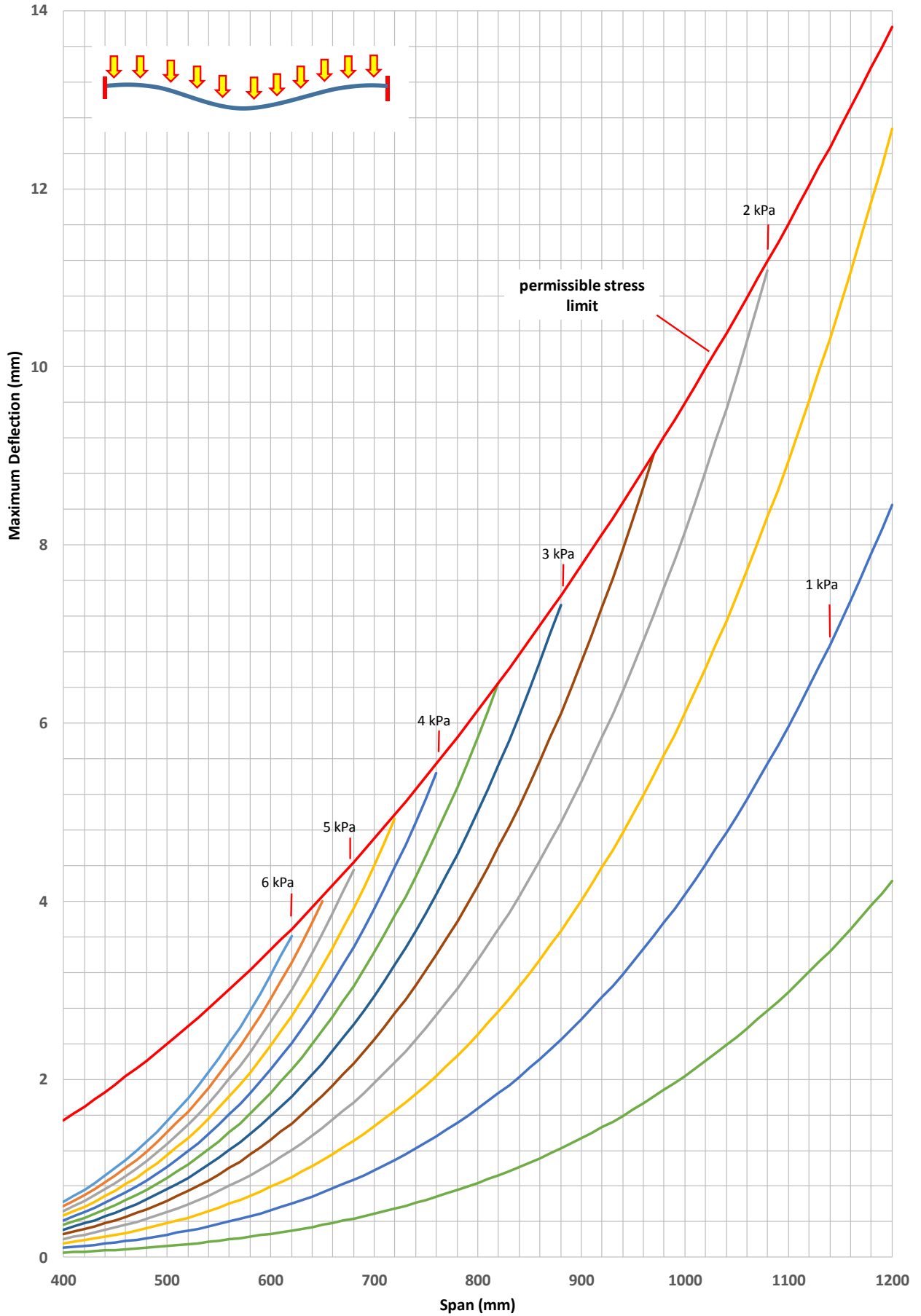
Nominal: 6 mm Symonite with 0.5 mm thick aluminium skins
 Single span: simple support / fixed support



6		mm		Nominal thickness		SYMONITE PANEL		Single span: simple support / fixed support						Aluminium	
		Panel thickness \geq		5.982		mm		Measured plate stiffness 'D' =		639,243		Nmm		E = 68,900 MPa	
		Thickness of aluminium skins \geq		0.528		mm		Aluminium permissible stress =		71		MPa		Poisson's Ratio = 0.33	
		Panel weight =		9.42		kg/m ²									
Span (mm)		Maximum deflection (mm)											Defn. at max. stress		
		Pressure (kPa)													
		6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1	0.5		
400	1.30	1.19	1.08	0.97	0.87	0.76	0.65	0.54	0.43	0.32	0.22	0.11	2.12		
410	1.43	1.31	1.19	1.08	0.96	0.84	0.72	0.60	0.48	0.36	0.24	0.12	2.23		
420	1.58	1.45	1.32	1.18	1.05	0.92	0.79	0.66	0.53	0.39	0.26	0.13	2.34		
430	1.73	1.59	1.45	1.30	1.16	1.01	0.87	0.72	0.58	0.43	0.29	0.14	2.45		
440	1.90	1.74	1.58	1.43	1.27	1.11	0.95	0.79	0.63	0.48	0.32	0.16	2.57		
450	2.08	1.91	1.73	1.56	1.39	1.21	1.04	0.87	0.69	0.52	0.35	0.17	2.69		
460	2.27	2.08	1.89	1.70	1.51	1.33	1.14	0.95	0.76	0.57	0.38	0.19	2.81		
470	2.48	2.27	2.06	1.86	1.65	1.44	1.24	1.03	0.83	0.62	0.41	0.21	2.93		
480	2.69	2.47	2.24	2.02	1.80	1.57	1.35	1.12	0.90	0.67	0.45	0.22	3.06		
490	2.92	2.68	2.44	2.19	1.95	1.71	1.46	1.22	0.97	0.73	0.49	0.24	3.19		
500	3.17	2.91	2.64	2.38	2.11	1.85	1.59	1.32	1.06	0.79	0.53	0.26	3.32		
510	3.43	3.15	2.86	2.57	2.29	2.00	1.72	1.43	1.14	0.86	0.57	0.29	3.45		
520		3.40	3.09	2.78	2.47	2.16	1.85	1.55	1.24	0.93	0.62	0.31	3.59		
530		3.67	3.34	3.00	2.67	2.34	2.00	1.67	1.33	1.00	0.67	0.33	3.73		
540			3.60	3.24	2.88	2.52	2.16	1.80	1.44	1.08	0.72	0.36	3.87		
550			3.87	3.48	3.10	2.71	2.32	1.93	1.55	1.16	0.77	0.39	4.02		
560			4.16	3.74	3.33	2.91	2.49	2.08	1.66	1.25	0.83	0.42	4.16		
570				4.02	3.57	3.12	2.68	2.23	1.79	1.34	0.89	0.45	4.31		
580				4.31	3.83	3.35	2.87	2.39	1.91	1.44	0.96	0.48	4.47		
590				4.61	4.10	3.59	3.07	2.56	2.05	1.54	1.02	0.51	4.62		
600					4.38	3.84	3.29	2.74	2.19	1.64	1.10	0.55	4.78		
610					4.68	4.10	3.51	2.93	2.34	1.76	1.17	0.59	4.94		
620					5.00	4.37	3.75	3.12	2.50	1.87	1.25	0.62	5.10		
630						4.66	4.00	3.33	2.66	2.00	1.33	0.67	5.27		
640						4.97	4.26	3.55	2.84	2.13	1.42	0.71	5.44		
650						5.28	4.53	3.77	3.02	2.26	1.51	0.75	5.61		
660						5.62	4.81	4.01	3.21	2.41	1.60	0.80	5.78		
670							5.11	4.26	3.41	2.56	1.70	0.85	5.96		
680							5.42	4.52	3.62	2.71	1.81	0.90	6.14		
690							5.75	4.79	3.83	2.88	1.92	0.96	6.32		
700							6.09	5.08	4.06	3.05	2.03	1.02	6.51		
710							6.45	5.37	4.30	3.22	2.15	1.07	6.69		
720							6.82	5.68	4.54	3.41	2.27	1.14	6.88		
730								6.00	4.80	3.60	2.40	1.20	7.07		
740								6.34	5.07	3.80	2.54	1.27	7.27		
750								6.69	5.35	4.01	2.68	1.34	7.47		
760								7.05	5.64	4.23	2.82	1.41	7.67		
770								7.43	5.95	4.46	2.97	1.49	7.87		
780								7.82	6.26	4.69	3.13	1.56	8.08		
790								8.23	6.59	4.94	3.29	1.65	8.29		
800									6.93	5.20	3.46	1.73	8.50		
810									7.28	5.46	3.64	1.82	8.71		
820									7.65	5.73	3.82	1.91	8.93		
830									8.03	6.02	4.01	2.01	9.15		
840									8.42	6.31	4.21	2.10	9.37		
850									8.83	6.62	4.41	2.21	9.59		
860									9.25	6.94	4.63	2.31	9.82		
870									9.69	7.27	4.84	2.42	10.05		
880									10.14	7.61	5.07	2.54	10.28		
890										7.96	5.31	2.65	10.52		
900										8.32	5.55	2.77	10.75		
910										8.70	5.80	2.90	10.99		
920										9.09	6.06	3.03	11.24		
930										9.49	6.33	3.16	11.48		
940										9.90	6.60	3.30	11.73		
950										10.33	6.89	3.44	11.98		
960										10.77	7.18	3.59	12.24		
970										11.23	7.49	3.74	12.49		
980										11.70	7.80	3.90	12.75		
990										12.18	8.12	4.06	13.01		
1000										12.68	8.46	4.23	13.28		
1010										13.20	8.80	4.40	13.54		
1020										13.73	9.15	4.58	13.81		
1030											9.52	4.76	14.08		
1040											9.89	4.95	14.36		
1050											10.28	5.14	14.64		
1060											10.68	5.34	14.92		
1070											11.08	5.54	15.20		
1080											11.50	5.75	15.49		
1090											11.94	5.97	15.77		
1100											12.38	6.19	16.06		
1110											12.84	6.42	16.36		
1120											13.31	6.65	16.65		
1130											13.79	6.89	16.95		
1140											14.28	7.14	17.25		
1150											14.79	7.39	17.56		
1160											15.31	7.66	17.86		
1170											15.85	7.92	18.17		
1180											16.39	8.20	18.49		
1190											16.96	8.48	18.80		
1200											17.53	8.77	19.12		



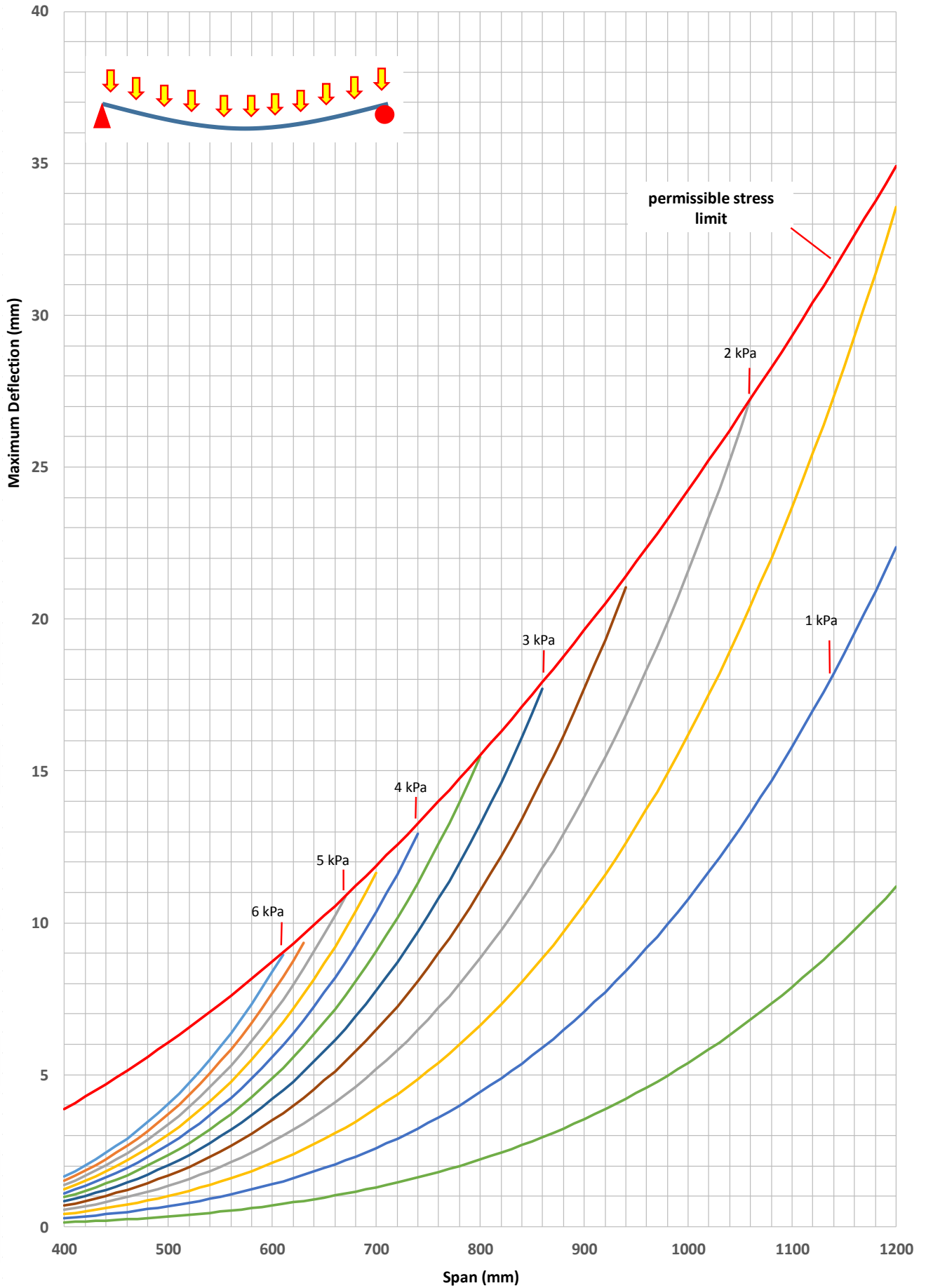
Nominal: 6 mm Symonite with 0.5 mm thick aluminium skins
 Single span: fixed support / fixed support



6		mm		Nominal thickness		SYMONITE PANEL		Single span: fixed support / fixed support							
Panel thickness ≥ 5.982		mm		Measured plate stiffness 'D' = 639,243		Nmm		Aluminium		E = 68,900		MPa			
Thickness of aluminium skins ≥ 0.528		mm		Aluminium permissible stress = 71		MPa		Poisson's Ratio = 0.33							
Panel weight = 9.42		kg/m ²													
Span (mm)		Maximum deflection (mm)											Defn. at max. stress		
		Pressure (kPa)													
		6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1	0.5		
400	0.63	0.57	0.52	0.47	0.42	0.37	0.31	0.26	0.21	0.16	0.10	0.05	1.54		
410	0.69	0.63	0.58	0.52	0.46	0.40	0.35	0.29	0.23	0.17	0.12	0.06	1.61		
420	0.76	0.70	0.63	0.57	0.51	0.44	0.38	0.32	0.25	0.19	0.13	0.06	1.69		
430	0.84	0.77	0.70	0.63	0.56	0.49	0.42	0.35	0.28	0.21	0.14	0.07	1.77		
440	0.92	0.84	0.76	0.69	0.61	0.53	0.46	0.38	0.31	0.23	0.15	0.08	1.86		
450	1.00	0.92	0.84	0.75	0.67	0.58	0.50	0.42	0.33	0.25	0.17	0.08	1.94		
460	1.09	1.00	0.91	0.82	0.73	0.64	0.55	0.46	0.36	0.27	0.18	0.09	2.03		
470	1.19	1.09	0.99	0.89	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	2.12		
480	1.30	1.19	1.08	0.97	0.87	0.76	0.65	0.54	0.43	0.32	0.22	0.11	2.21		
490	1.41	1.29	1.17	1.06	0.94	0.82	0.70	0.59	0.47	0.35	0.23	0.12	2.30		
500	1.53	1.40	1.27	1.15	1.02	0.89	0.76	0.64	0.51	0.38	0.25	0.13	2.40		
510	1.65	1.52	1.38	1.24	1.10	0.96	0.83	0.69	0.55	0.41	0.28	0.14	2.50		
520	1.79	1.64	1.49	1.34	1.19	1.04	0.89	0.74	0.60	0.45	0.30	0.15	2.59		
530	1.93	1.77	1.61	1.45	1.29	1.13	0.96	0.80	0.64	0.48	0.32	0.16	2.69		
540	2.08	1.91	1.73	1.56	1.39	1.21	1.04	0.87	0.69	0.52	0.35	0.17	2.80		
550	2.24	2.05	1.86	1.68	1.49	1.30	1.12	0.93	0.75	0.56	0.37	0.19	2.90		
560	2.40	2.20	2.00	1.80	1.60	1.40	1.20	1.00	0.80	0.60	0.40	0.20	3.01		
570	2.58	2.37	2.15	1.94	1.72	1.51	1.29	1.08	0.86	0.65	0.43	0.22	3.12		
580	2.77	2.54	2.31	2.07	1.84	1.61	1.38	1.15	0.92	0.69	0.46	0.23	3.23		
590	2.96	2.72	2.47	2.22	1.97	1.73	1.48	1.23	0.99	0.74	0.49	0.25	3.34		
600	3.17	2.90	2.64	2.38	2.11	1.85	1.58	1.32	1.06	0.79	0.53	0.26	3.45		
610	3.38	3.10	2.82	2.54	2.26	1.97	1.69	1.41	1.13	0.85	0.56	0.28	3.57		
620	3.61	3.31	3.01	2.71	2.41	2.11	1.81	1.50	1.20	0.90	0.60	0.30	3.69		
630		3.53	3.21	2.89	2.57	2.25	1.93	1.60	1.28	0.96	0.64	0.32	3.81		
640		3.76	3.42	3.08	2.73	2.39	2.05	1.71	1.37	1.03	0.68	0.34	3.93		
650		4.00	3.64	3.27	2.91	2.55	2.18	1.82	1.45	1.09	0.73	0.36	4.05		
660			3.86	3.48	3.09	2.71	2.32	1.93	1.55	1.16	0.77	0.39	4.18		
670			4.10	3.69	3.28	2.87	2.46	2.05	1.64	1.23	0.82	0.41	4.31		
680			4.36	3.92	3.48	3.05	2.61	2.18	1.74	1.31	0.87	0.44	4.44		
690				4.16	3.69	3.23	2.77	2.31	1.85	1.39	0.92	0.46	4.57		
700				4.40	3.91	3.42	2.93	2.45	1.96	1.47	0.98	0.49	4.70		
710				4.66	4.14	3.62	3.11	2.59	2.07	1.55	1.04	0.52	4.84		
720				4.93	4.38	3.83	3.28	2.74	2.19	1.64	1.09	0.55	4.97		
730					4.63	4.05	3.47	2.89	2.31	1.74	1.16	0.58	5.11		
740					4.89	4.28	3.66	3.05	2.44	1.83	1.22	0.61	5.25		
750					5.16	4.51	3.87	3.22	2.58	1.93	1.29	0.64	5.40		
760					5.44	4.76	4.08	3.40	2.72	2.04	1.36	0.68	5.54		
770						5.01	4.30	3.58	2.86	2.15	1.43	0.72	5.69		
780						5.28	4.52	3.77	3.02	2.26	1.51	0.75	5.84		
790						5.55	4.76	3.97	3.17	2.38	1.59	0.79	5.99		
800						5.84	5.01	4.17	3.34	2.50	1.67	0.83	6.14		
810						6.14	5.26	4.38	3.51	2.63	1.75	0.88	6.29		
820						6.45	5.53	4.60	3.68	2.76	1.84	0.92	6.45		
830							5.80	4.83	3.87	2.90	1.93	0.97	6.61		
840							6.08	5.07	4.06	3.04	2.03	1.01	6.77		
850							6.38	5.32	4.25	3.19	2.13	1.06	6.93		
860							6.69	5.57	4.46	3.34	2.23	1.11	7.10		
870							7.00	5.83	4.67	3.50	2.33	1.17	7.26		
880							7.33	6.11	4.89	3.66	2.44	1.22	7.43		
890								6.39	5.11	3.83	2.56	1.28	7.60		
900								6.68	5.35	4.01	2.67	1.34	7.77		
910								6.98	5.59	4.19	2.79	1.40	7.94		
920								7.30	5.84	4.38	2.92	1.46	8.12		
930								7.62	6.09	4.57	3.05	1.52	8.30		
940								7.95	6.36	4.77	3.18	1.59	8.48		
950								8.30	6.64	4.98	3.32	1.66	8.66		
960								8.65	6.92	5.19	3.46	1.73	8.84		
970								9.02	7.21	5.41	3.61	1.80	9.03		
980									7.52	5.64	3.76	1.88	9.21		
990									7.83	5.87	3.91	1.96	9.40		
1000									8.15	6.11	4.07	2.04	9.59		
1010									8.48	6.36	4.24	2.12	9.79		
1020									8.82	6.61	4.41	2.20	9.98		
1030									9.17	6.88	4.59	2.29	10.18		
1040									9.53	7.15	4.77	2.38	10.38		
1050									9.90	7.43	4.95	2.48	10.58		
1060									10.29	7.71	5.14	2.57	10.78		
1070									10.68	8.01	5.34	2.67	10.98		
1080									11.08	8.31	5.54	2.77	11.19		
1090										8.63	5.75	2.88	11.40		
1100										8.95	5.96	2.98	11.61		
1110										9.28	6.18	3.09	11.82		
1120										9.62	6.41	3.21	12.03		
1130										9.96	6.64	3.32	12.25		
1140										10.32	6.88	3.44	12.47		
1150										10.69	7.13	3.56	12.69		
1160										11.06	7.38	3.69	12.91		
1170										11.45	7.63	3.82	13.13		
1180										11.85	7.90	3.95	13.36		
1190										12.25	8.17	4.08	13.59		
1200										12.67	8.45	4.22	13.82		



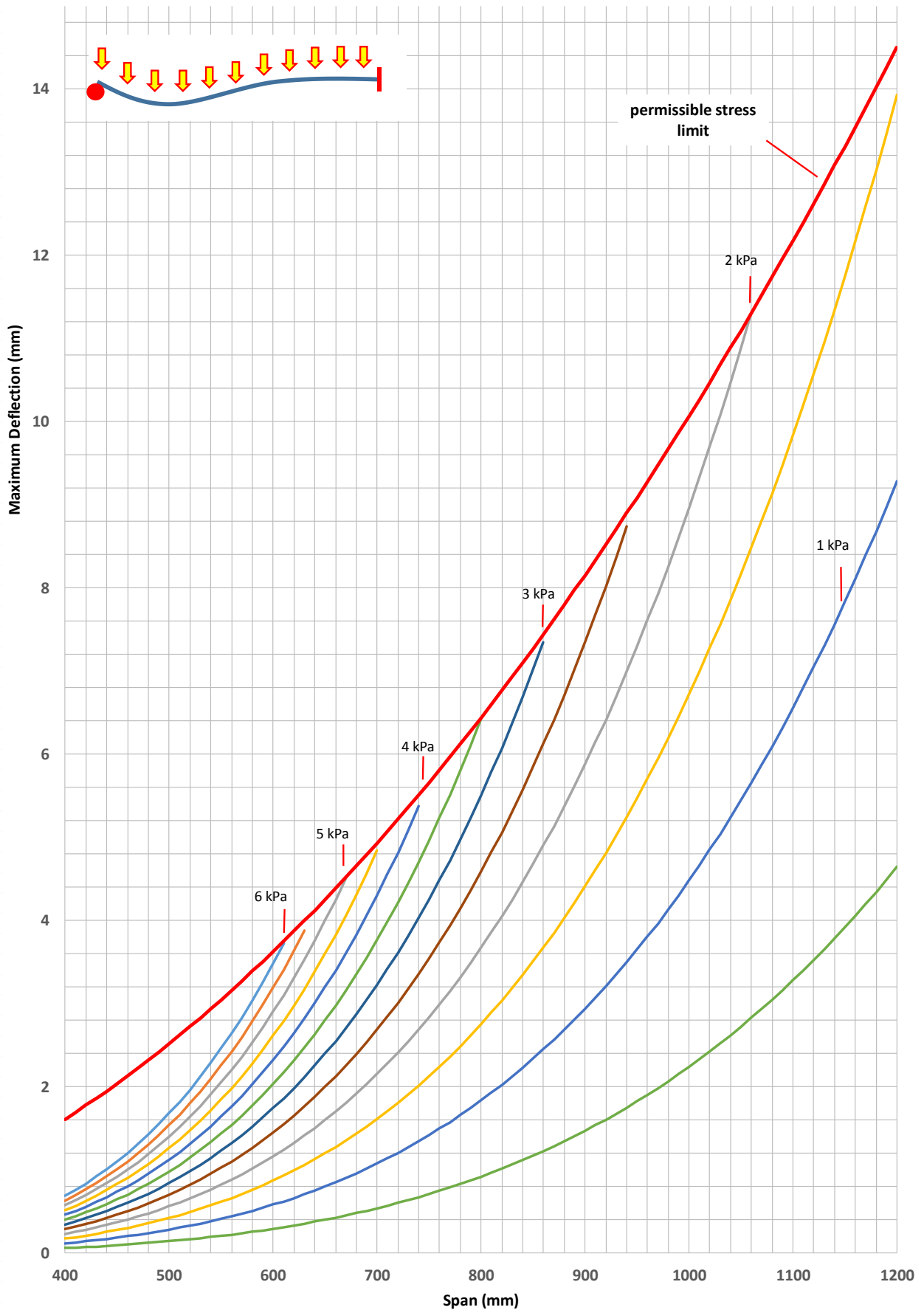
Nominal: 8 mm Symonite with 0.5 mm thick aluminium skins
 Single span: simple support / simple support



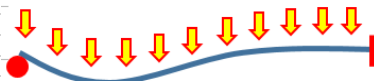
8		mm	Nominal thickness			SYMONITE PANEL			Single span: simple support / simple support					
Panel thickness ≥		7.891	mm			Measured plate stiffness 'D' = 1,207,206					Nmm		Aluminium	
Thickness of aluminium skins ≥		0.516	mm			Aluminium permissible stress = 71					MPa		E = 68,900 MPa	
Panel weight =		11.56	kg/m ²										Poisson's Ratio = 0.33	
Span (mm)		Maximum deflection (mm)										Defln. at max. stress		
		Pressure (kPa)												
		6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1	0.5	
400	1.66	1.52	1.38	1.24	1.10	0.97	0.83	0.69	0.55	0.41	0.28	0.14	3.88	
410	1.83	1.68	1.52	1.37	1.22	1.07	0.91	0.76	0.61	0.46	0.30	0.15	4.08	
420	2.01	1.85	1.68	1.51	1.34	1.17	1.01	0.84	0.67	0.50	0.34	0.17	4.28	
430	2.21	2.03	1.84	1.66	1.47	1.29	1.11	0.92	0.74	0.55	0.37	0.18	4.48	
440	2.43	2.22	2.02	1.82	1.62	1.41	1.21	1.01	0.81	0.61	0.40	0.20	4.69	
450	2.65	2.43	2.21	1.99	1.77	1.55	1.33	1.11	0.88	0.66	0.44	0.22	4.91	
460	2.90	2.66	2.41	2.17	1.93	1.69	1.45	1.21	0.97	0.72	0.48	0.24	5.13	
470	3.16	2.89	2.63	2.37	2.11	1.84	1.58	1.32	1.05	0.79	0.53	0.26	5.36	
480	3.44	3.15	2.86	2.58	2.29	2.00	1.72	1.43	1.15	0.86	0.57	0.29	5.59	
490	3.73	3.42	3.11	2.80	2.49	2.18	1.87	1.55	1.24	0.93	0.62	0.31	5.82	
500	4.04	3.71	3.37	3.03	2.70	2.36	2.02	1.69	1.35	1.01	0.67	0.34	6.06	
510	4.38	4.01	3.65	3.28	2.92	2.55	2.19	1.82	1.46	1.09	0.73	0.36	6.31	
520	4.73	4.34	3.94	3.55	3.15	2.76	2.37	1.97	1.58	1.18	0.79	0.39	6.56	
530	5.11	4.68	4.26	3.83	3.40	2.98	2.55	2.13	1.70	1.28	0.85	0.43	6.81	
540	5.50	5.04	4.59	4.13	3.67	3.21	2.75	2.29	1.83	1.38	0.92	0.46	7.07	
550	5.92	5.43	4.93	4.44	3.95	3.45	2.96	2.47	1.97	1.48	0.99	0.49	7.33	
560	6.36	5.83	5.30	4.77	4.24	3.71	3.18	2.65	2.12	1.59	1.06	0.53	7.60	
570	6.83	6.26	5.69	5.12	4.55	3.98	3.42	2.85	2.28	1.71	1.14	0.57	7.88	
580	7.32	6.71	6.10	5.49	4.88	4.27	3.66	3.05	2.44	1.83	1.22	0.61	8.16	
590	7.84	7.19	6.53	5.88	5.23	4.57	3.92	3.27	2.61	1.96	1.31	0.65	8.44	
600	8.39	7.69	6.99	6.29	5.59	4.89	4.19	3.49	2.80	2.10	1.40	0.70	8.73	
610	8.96	8.21	7.47	6.72	5.97	5.23	4.48	3.73	2.99	2.24	1.49	0.75	9.02	
620		8.77	7.97	7.17	6.38	5.58	4.78	3.98	3.19	2.39	1.59	0.80	9.32	
630		9.35	8.50	7.65	6.80	5.95	5.10	4.25	3.40	2.55	1.70	0.85	9.62	
640			9.05	8.14	7.24	6.33	5.43	4.52	3.62	2.71	1.81	0.90	9.93	
650			9.63	8.66	7.70	6.74	5.78	4.81	3.85	2.89	1.93	0.96	10.24	
660			10.23	9.21	8.19	7.16	6.14	5.12	4.09	3.07	2.05	1.02	10.56	
670			10.87	9.78	8.69	7.61	6.52	5.43	4.35	3.26	2.17	1.09	10.88	
680				10.38	9.22	8.07	6.92	5.77	4.61	3.46	2.31	1.15	11.21	
690				11.00	9.78	8.56	7.33	6.11	4.89	3.67	2.44	1.22	11.54	
700				11.65	10.36	9.06	7.77	6.47	5.18	3.88	2.59	1.29	11.88	
710					10.96	9.59	8.22	6.85	5.48	4.11	2.74	1.37	12.22	
720					11.59	10.15	8.70	7.25	5.80	4.35	2.90	1.45	12.57	
730					12.25	10.72	9.19	7.66	6.13	4.59	3.06	1.53	12.92	
740					12.94	11.32	9.70	8.09	6.47	4.85	3.23	1.62	13.28	
750						11.94	10.24	8.53	6.83	5.12	3.41	1.71	13.64	
760						12.59	10.80	9.00	7.20	5.40	3.60	1.80	14.00	
770						13.27	11.37	9.48	7.58	5.69	3.79	1.90	14.37	
780						13.97	11.98	9.98	7.98	5.99	3.99	2.00	14.75	
790						14.70	12.60	10.50	8.40	6.30	4.20	2.10	15.13	
800						15.46	13.25	11.04	8.84	6.63	4.42	2.21	15.52	
810							13.93	11.61	9.29	6.96	4.64	2.32	15.91	
820							14.63	12.19	9.75	7.31	4.88	2.44	16.30	
830							15.36	12.80	10.24	7.68	5.12	2.56	16.70	
840							16.11	13.43	10.74	8.06	5.37	2.69	17.11	
850							16.89	14.08	11.26	8.45	5.63	2.82	17.52	
860								17.70	14.75	11.80	8.85	5.90	2.95	17.93
870									15.45	12.36	9.27	6.18	3.09	18.35
880									16.17	12.94	9.70	6.47	3.23	18.77
890									16.92	13.53	10.15	6.77	3.38	19.20
900									17.69	14.15	10.61	7.08	3.54	19.64
910									18.49	14.79	11.09	7.40	3.70	20.08
920									19.32	15.45	11.59	7.73	3.86	20.52
930									20.17	16.14	12.10	8.07	4.03	20.97
940									21.05	16.84	12.63	8.42	4.21	21.42
950										17.57	13.18	8.79	4.39	21.88
960									18.32	13.74	9.16	4.58	22.34	
970									19.10	14.32	9.55	4.77	22.81	
980									19.90	14.92	9.95	4.97	23.28	
990									20.72	15.54	10.36	5.18	23.76	
1000									21.57	16.18	10.79	5.39	24.24	
1010									22.45	16.84	11.22	5.61	24.73	
1020									23.35	17.51	11.68	5.84	25.22	
1030									24.28	18.21	12.14	6.07	25.72	
1040									25.24	18.93	12.62	6.31	26.22	
1050									26.22	19.67	13.11	6.56	26.73	
1060									27.23	20.43	13.62	6.81	27.24	
1070										21.21	14.14	7.07	27.76	
1080										22.01	14.67	7.34	28.28	
1090										22.84	15.23	7.61	28.80	
1100										23.69	15.79	7.90	29.33	
1110										24.56	16.37	8.19	29.87	
1120										25.46	16.97	8.49	30.41	
1130										26.38	17.59	8.79	30.96	
1140										27.33	18.22	9.11	31.51	
1150										28.30	18.86	9.43	32.06	
1160										29.29	19.53	9.76	32.62	
1170										30.32	20.21	10.11	33.19	
1180										31.37	20.91	10.46	33.76	
1190										32.44	21.63	10.81	34.33	
1200										33.55	22.37	11.18	34.91	



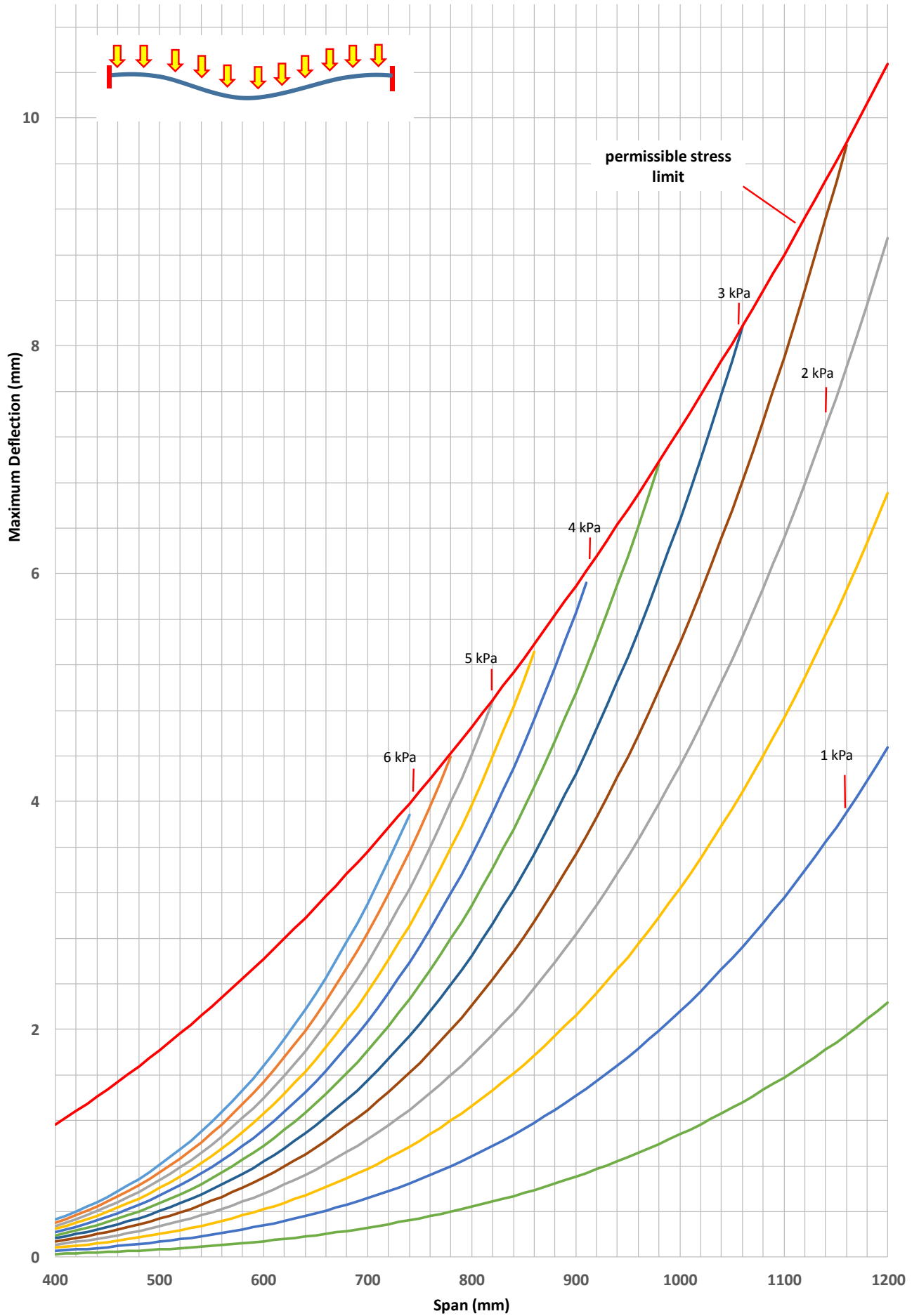
Nominal: 8 mm Symonite with 0.5 mm thick aluminium skins
 Single span: simple support / fixed support



8	mm	Nominal thickness	SYMONITE PANEL										Single span: simple support / fixed support												
		Panel thickness ≥ 7.891	mm											Measured plate stiffness 'D' = 1,207,206 Nmm										Aluminium	
		Thickness of aluminium skins ≥ 0.516	mm											Aluminium permissible stress = 71 MPa										E = 68,900 MPa	
		Panel weight = 11.56	kg/m ²																					Poisson's Ratio = 0.33	
Maximum deflection (mm)														Defln.											
Span (mm)	Pressure (kPa)												at max. stress												
	6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1	0.5													
400	0.69	0.63	0.57	0.52	0.46	0.40	0.34	0.29	0.23	0.17	0.11	0.06	1.61												
410	0.76	0.70	0.63	0.57	0.51	0.44	0.38	0.32	0.25	0.19	0.13	0.06	1.69												
420	0.84	0.77	0.70	0.63	0.56	0.49	0.42	0.35	0.28	0.21	0.14	0.07	1.78												
430	0.92	0.84	0.77	0.69	0.61	0.54	0.46	0.38	0.31	0.23	0.15	0.08	1.86												
440	1.01	0.92	0.84	0.76	0.67	0.59	0.50	0.42	0.34	0.25	0.17	0.08	1.95												
450	1.10	1.01	0.92	0.83	0.73	0.64	0.55	0.46	0.37	0.28	0.18	0.09	2.04												
460	1.20	1.10	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	2.13												
470	1.31	1.20	1.09	0.98	0.87	0.76	0.66	0.55	0.44	0.33	0.22	0.11	2.22												
480	1.43	1.31	1.19	1.07	0.95	0.83	0.71	0.59	0.48	0.36	0.24	0.12	2.32												
490	1.55	1.42	1.29	1.16	1.03	0.90	0.77	0.65	0.52	0.39	0.26	0.13	2.42												
500	1.68	1.54	1.40	1.26	1.12	0.98	0.84	0.70	0.56	0.42	0.28	0.14	2.52												
510	1.82	1.67	1.51	1.36	1.21	1.06	0.91	0.76	0.61	0.45	0.30	0.15	2.62												
520	1.96	1.80	1.64	1.47	1.31	1.15	0.98	0.82	0.65	0.49	0.33	0.16	2.72												
530	2.12	1.94	1.77	1.59	1.41	1.24	1.06	0.88	0.71	0.53	0.35	0.18	2.83												
540	2.28	2.09	1.90	1.71	1.52	1.33	1.14	0.95	0.76	0.57	0.38	0.19	2.93												
550	2.46	2.25	2.05	1.84	1.64	1.43	1.23	1.02	0.82	0.61	0.41	0.20	3.04												
560	2.64	2.42	2.20	1.98	1.76	1.54	1.32	1.10	0.88	0.66	0.44	0.22	3.16												
570	2.84	2.60	2.36	2.13	1.89	1.65	1.42	1.18	0.95	0.71	0.47	0.24	3.27												
580	3.04	2.79	2.53	2.28	2.03	1.77	1.52	1.27	1.01	0.76	0.51	0.25	3.39												
590	3.26	2.98	2.71	2.44	2.17	1.90	1.63	1.36	1.09	0.81	0.54	0.27	3.50												
600	3.48	3.19	2.90	2.61	2.32	2.03	1.74	1.45	1.16	0.87	0.58	0.29	3.62												
610	3.72	3.41	3.10	2.79	2.48	2.17	1.86	1.55	1.24	0.93	0.62	0.31	3.74												
620		3.64	3.31	2.98	2.65	2.32	1.98	1.65	1.32	0.99	0.66	0.33	3.87												
630		3.88	3.53	3.17	2.82	2.47	2.12	1.76	1.41	1.06	0.71	0.35	3.99												
640			3.76	3.38	3.00	2.63	2.25	1.88	1.50	1.13	0.75	0.38	4.12												
650			4.00	3.60	3.20	2.80	2.40	2.00	1.60	1.20	0.80	0.40	4.25												
660			4.25	3.82	3.40	2.97	2.55	2.12	1.70	1.27	0.85	0.42	4.38												
670			4.51	4.06	3.61	3.16	2.71	2.26	1.80	1.35	0.90	0.45	4.52												
680				4.31	3.83	3.35	2.87	2.39	1.91	1.44	0.96	0.48	4.65												
690				4.57	4.06	3.55	3.04	2.54	2.03	1.52	1.01	0.51	4.79												
700				4.84	4.30	3.76	3.23	2.69	2.15	1.61	1.08	0.54	4.93												
710					4.55	3.98	3.41	2.84	2.28	1.71	1.14	0.57	5.07												
720					4.81	4.21	3.61	3.01	2.41	1.80	1.20	0.60	5.22												
730					5.09	4.45	3.81	3.18	2.54	1.91	1.27	0.64	5.36												
740					5.37	4.70	4.03	3.36	2.69	2.01	1.34	0.67	5.51												
750						4.96	4.25	3.54	2.83	2.13	1.42	0.71	5.66												
760						5.23	4.48	3.73	2.99	2.24	1.49	0.75	5.81												
770						5.51	4.72	3.94	3.15	2.36	1.57	0.79	5.97												
780						5.80	4.97	4.14	3.31	2.49	1.66	0.83	6.12												
790						6.10	5.23	4.36	3.49	2.62	1.74	0.87	6.28												
800						6.42	5.50	4.59	3.67	2.75	1.83	0.92	6.44												
810							5.78	4.82	3.85	2.89	1.93	0.96	6.60												
820							6.07	5.06	4.05	3.04	2.02	1.01	6.77												
830							6.38	5.31	4.25	3.19	2.13	1.06	6.93												
840							6.69	5.57	4.46	3.34	2.23	1.11	7.10												
850								7.01	5.84	4.67	3.51	2.34	7.27												
860								7.35	6.12	4.90	3.67	2.45	7.44												
870									6.41	5.13	3.85	2.57	7.62												
880									6.71	5.37	4.03	2.69	7.79												
890									7.02	5.62	4.21	2.81	7.97												
900									7.34	5.88	4.41	2.94	8.15												
910									7.68	6.14	4.61	3.07	8.33												
920									8.02	6.42	4.81	3.21	8.52												
930									8.37	6.70	5.02	3.35	8.70												
940									8.74	6.99	5.24	3.50	8.89												
950										7.29	5.47	3.65	9.08												
960										7.61	5.70	3.80	9.28												
970										7.93	5.95	3.96	9.47												
980										8.26	6.20	4.13	9.67												
990										8.60	6.45	4.30	9.86												
1000										8.96	6.72	4.48	10.06												
1010										9.32	6.99	4.66	10.27												
1020										9.69	7.27	4.85	10.47												
1030										10.08	7.56	5.04	10.68												
1040										10.48	7.86	5.24	10.89												
1050										10.89	8.16	5.44	11.10												
1060										11.31	8.48	5.65	11.31												
1070											8.80	5.87	2.93	11.52											
1080											9.14	6.09	3.05	11.74											
1090											9.48	6.32	3.16	11.96											
1100											9.83	6.56	3.28	12.18											
1110											10.20	6.80	3.40	12.40											
1120											10.57	7.05	3.52	12.62											
1130											10.95	7.30	3.65	12.85											
1140											11.34	7.56	3.78	13.08											
1150											11.75	7.83	3.92	13.31											
1160											12.16	8.11	4.05	13.54											
1170											12.59	8.39	4.20	13.78											
1180											13.02	8.68	4.34	14.01											
1190											13.47	8.98	4.49	14.25											
1200											13.93	9.28	4.64	14.49											



Nominal: 8 mm Symonite with 0.5 mm thick aluminium skins
 Single span: fixed support / fixed support



8 mm		Nominal thickness		SYMONITE PANEL		Single span: fixed support / fixed support							Aluminium	
Panel thickness ≥ 7.891 mm		7.891 mm		Measured plate stiffness 'D' = 1,207,206 Nmm		E = 68,900 MPa		Poisson's Ratio = 0.33						
Thickness of aluminium skins ≥ 0.516 mm		0.516 mm		Aluminium permissible stress = 71 MPa										
Panel weight = 11.56 kg/m ²														
Span (mm)	Maximum deflection (mm)											Defln. at max. stress		
	6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1		0.5	
400	0.33	0.30	0.28	0.25	0.22	0.19	0.17	0.14	0.11	0.08	0.06	0.03	1.16	
410	0.37	0.34	0.30	0.27	0.24	0.21	0.18	0.15	0.12	0.09	0.06	0.03	1.22	
420	0.40	0.37	0.34	0.30	0.27	0.23	0.20	0.17	0.13	0.10	0.07	0.03	1.28	
430	0.44	0.41	0.37	0.33	0.29	0.26	0.22	0.18	0.15	0.11	0.07	0.04	1.34	
440	0.49	0.44	0.40	0.36	0.32	0.28	0.24	0.20	0.16	0.12	0.08	0.04	1.41	
450	0.53	0.49	0.44	0.40	0.35	0.31	0.27	0.22	0.18	0.13	0.09	0.04	1.47	
460	0.58	0.53	0.48	0.43	0.39	0.34	0.29	0.24	0.19	0.14	0.10	0.05	1.54	
470	0.63	0.58	0.53	0.47	0.42	0.37	0.32	0.26	0.21	0.16	0.11	0.05	1.61	
480	0.69	0.63	0.57	0.52	0.46	0.40	0.34	0.29	0.23	0.17	0.11	0.06	1.68	
490	0.75	0.68	0.62	0.56	0.50	0.44	0.37	0.31	0.25	0.19	0.12	0.06	1.75	
500	0.81	0.74	0.67	0.61	0.54	0.47	0.40	0.34	0.27	0.20	0.13	0.07	1.82	
510	0.88	0.80	0.73	0.66	0.58	0.51	0.44	0.36	0.29	0.22	0.15	0.07	1.89	
520	0.95	0.87	0.79	0.71	0.63	0.55	0.47	0.39	0.32	0.24	0.16	0.08	1.97	
530	1.02	0.94	0.85	0.77	0.68	0.60	0.51	0.43	0.34	0.26	0.17	0.09	2.04	
540	1.10	1.01	0.92	0.83	0.73	0.64	0.55	0.46	0.37	0.28	0.18	0.09	2.12	
550	1.18	1.09	0.99	0.89	0.79	0.69	0.59	0.49	0.39	0.30	0.20	0.10	2.20	
560	1.27	1.17	1.06	0.95	0.85	0.74	0.64	0.53	0.42	0.32	0.21	0.11	2.28	
570	1.37	1.25	1.14	1.02	0.91	0.80	0.68	0.57	0.46	0.34	0.23	0.11	2.36	
580	1.46	1.34	1.22	1.10	0.98	0.85	0.73	0.61	0.49	0.37	0.24	0.12	2.45	
590	1.57	1.44	1.31	1.18	1.05	0.91	0.78	0.65	0.52	0.39	0.26	0.13	2.53	
600	1.68	1.54	1.40	1.26	1.12	0.98	0.84	0.70	0.56	0.42	0.28	0.14	2.62	
610	1.79	1.64	1.49	1.34	1.19	1.05	0.90	0.75	0.60	0.45	0.30	0.15	2.71	
620	1.91	1.75	1.59	1.43	1.28	1.12	0.96	0.80	0.64	0.48	0.32	0.16	2.80	
630	2.04	1.87	1.70	1.53	1.36	1.19	1.02	0.85	0.68	0.51	0.34	0.17	2.89	
640	2.17	1.99	1.81	1.63	1.45	1.27	1.09	0.90	0.72	0.54	0.36	0.18	2.98	
650	2.31	2.12	1.93	1.73	1.54	1.35	1.16	0.96	0.77	0.58	0.39	0.19	3.07	
660	2.46	2.25	2.05	1.84	1.64	1.43	1.23	1.02	0.82	0.61	0.41	0.20	3.17	
670	2.61	2.39	2.17	1.96	1.74	1.52	1.30	1.09	0.87	0.65	0.43	0.22	3.26	
680	2.77	2.54	2.31	2.08	1.84	1.61	1.38	1.15	0.92	0.69	0.46	0.23	3.36	
690	2.93	2.69	2.44	2.20	1.96	1.71	1.47	1.22	0.98	0.73	0.49	0.24	3.46	
700	3.11	2.85	2.59	2.33	2.07	1.81	1.55	1.29	1.04	0.78	0.52	0.26	3.56	
710	3.29	3.01	2.74	2.47	2.19	1.92	1.64	1.37	1.10	0.82	0.55	0.27	3.67	
720	3.48	3.19	2.90	2.61	2.32	2.03	1.74	1.45	1.16	0.87	0.58	0.29	3.77	
730	3.68	3.37	3.06	2.76	2.45	2.14	1.84	1.53	1.23	0.92	0.61	0.31	3.88	
740	3.88	3.56	3.23	2.91	2.59	2.26	1.94	1.62	1.29	0.97	0.65	0.32	3.98	
750		3.75	3.41	3.07	2.73	2.39	2.05	1.71	1.37	1.02	0.68	0.34	4.09	
760		3.96	3.60	3.24	2.88	2.52	2.16	1.80	1.44	1.08	0.72	0.36	4.20	
770		4.17	3.79	3.41	3.03	2.65	2.27	1.90	1.52	1.14	0.76	0.38	4.31	
780		4.39	3.99	3.59	3.19	2.79	2.40	2.00	1.60	1.20	0.80	0.40	4.42	
790			4.20	3.78	3.36	2.94	2.52	2.10	1.68	1.26	0.84	0.42	4.54	
800			4.42	3.98	3.53	3.09	2.65	2.21	1.77	1.33	0.88	0.44	4.65	
810			4.64	4.18	3.71	3.25	2.79	2.32	1.86	1.39	0.93	0.46	4.77	
820			4.88	4.39	3.90	3.41	2.93	2.44	1.95	1.46	0.98	0.49	4.89	
830				4.61	4.10	3.58	3.07	2.56	2.05	1.54	1.02	0.51	5.01	
840				4.83	4.30	3.76	3.22	2.69	2.15	1.61	1.07	0.54	5.13	
850				5.07	4.50	3.94	3.38	2.82	2.25	1.69	1.13	0.56	5.25	
860				5.31	4.72	4.13	3.54	2.95	2.36	1.77	1.18	0.59	5.38	
870					4.94	4.33	3.71	3.09	2.47	1.85	1.24	0.62	5.50	
880					5.17	4.53	3.88	3.23	2.59	1.94	1.29	0.65	5.63	
890					5.41	4.74	4.06	3.38	2.71	2.03	1.35	0.68	5.76	
900					5.66	4.95	4.25	3.54	2.83	2.12	1.42	0.71	5.89	
910					5.92	5.18	4.44	3.70	2.96	2.22	1.48	0.74	6.02	
920						5.41	4.64	3.86	3.09	2.32	1.55	0.77	6.16	
930						5.65	4.84	4.03	3.23	2.42	1.61	0.81	6.29	
940						5.89	5.05	4.21	3.37	2.53	1.68	0.84	6.43	
950						6.15	5.27	4.39	3.51	2.64	1.76	0.88	6.56	
960						6.41	5.50	4.58	3.66	2.75	1.83	0.92	6.70	
970						6.68	5.73	4.77	3.82	2.86	1.91	0.95	6.84	
980						6.96	5.97	4.97	3.98	2.98	1.99	0.99	6.98	
990							6.22	5.18	4.14	3.11	2.07	1.04	7.13	
1000							6.47	5.39	4.31	3.24	2.16	1.08	7.27	
1010							6.73	5.61	4.49	3.37	2.24	1.12	7.42	
1020							7.01	5.84	4.67	3.50	2.34	1.17	7.57	
1030							7.28	6.07	4.86	3.64	2.43	1.21	7.72	
1040							7.57	6.31	5.05	3.79	2.52	1.26	7.87	
1050							7.87	6.56	5.24	3.93	2.62	1.31	8.02	
1060							8.17	6.81	5.45	4.09	2.72	1.36	8.17	
1070								7.07	5.66	4.24	2.83	1.41	8.33	
1080								7.34	5.87	4.40	2.93	1.47	8.48	
1090								7.61	6.09	4.57	3.05	1.52	8.64	
1100								7.90	6.32	4.74	3.16	1.58	8.80	
1110								8.19	6.55	4.91	3.27	1.64	8.96	
1120								8.49	6.79	5.09	3.39	1.70	9.12	
1130								8.79	7.03	5.28	3.52	1.76	9.29	
1140								9.11	7.29	5.47	3.64	1.82	9.45	
1150								9.43	7.55	5.66	3.77	1.89	9.62	
1160								9.76	7.81	5.86	3.91	1.95	9.79	
1170									8.08	6.06	4.04	2.02	9.96	
1180									8.36	6.27	4.18	2.09	10.13	
1190									8.65	6.49	4.33	2.16	10.30	
1200									8.95	6.71	4.47	2.24	10.47	

