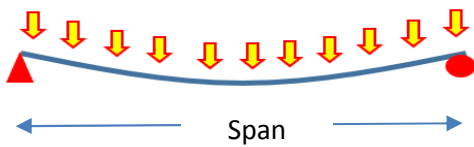


Designing for Distributed Loading

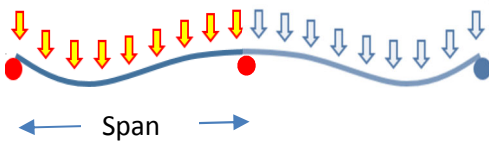
The following graphical and tabulated data enables accurate and quick determination of maximum deflections of spans of Symonite panelling resulting from uniformly distributed loading such as wind loading, gravity loading or combinations of same.

Support Conditions

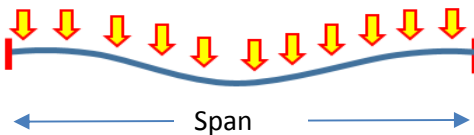
1. Opposite edges simply supported. Supported edges free to rotate. No bending moment at the supports.



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. This is based on a safety factor of 1.5 on a minimum yield strength of the aluminium alloy skin material of 107 MPa. Note that if the yield strength of the aluminium alloy skin material is exceeded, the panel will be permanently bent such that it will not return to its original flat condition on removal of the load.

WARNING – ACCEPTABLE STRESSES AND DEFLECTIONS

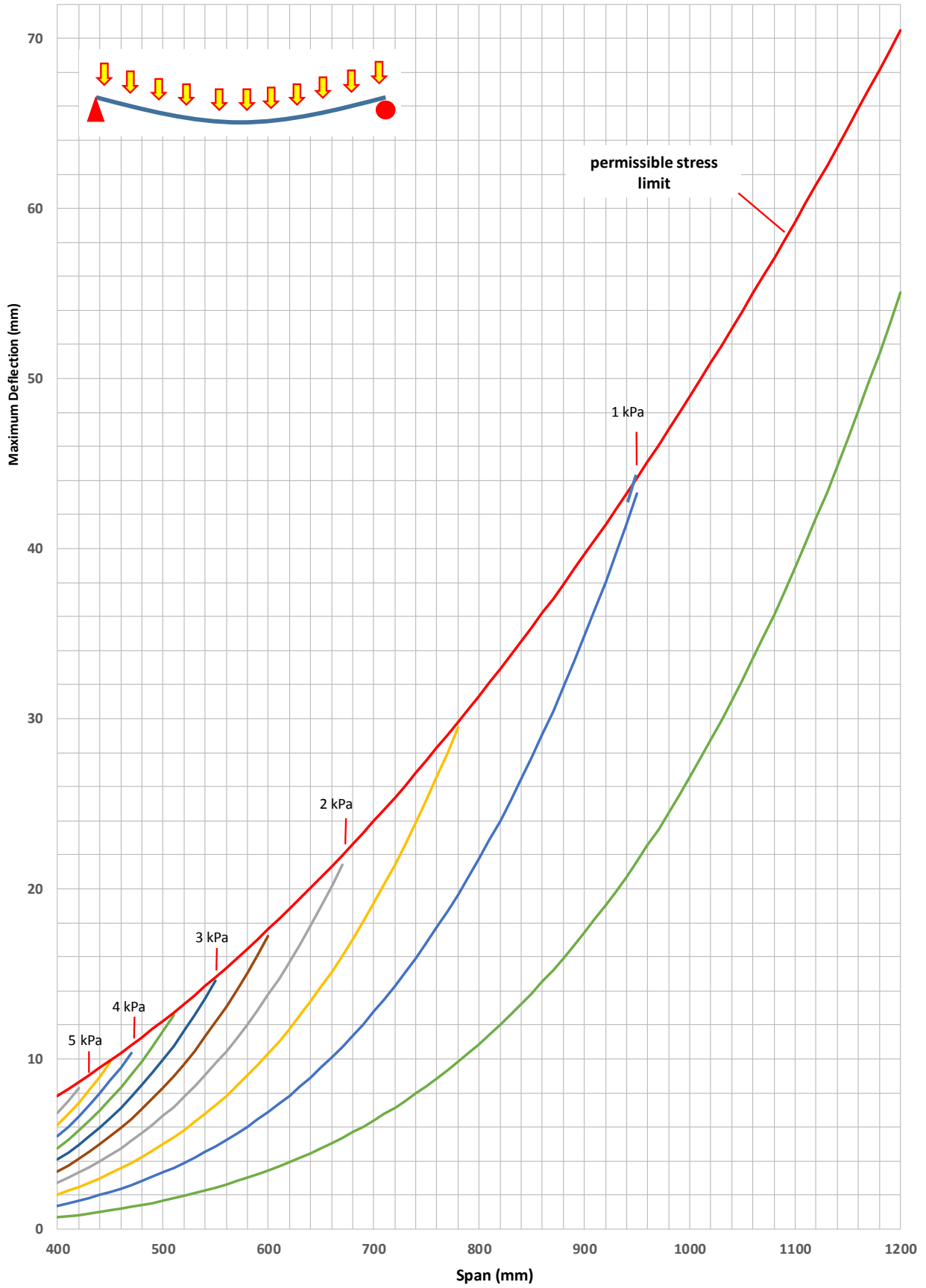
Please note that the following graphical and tabular data is given for guidance only, it is the designer's responsibility to ensure that the design satisfies the requirements of the regulatory authorities.

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.

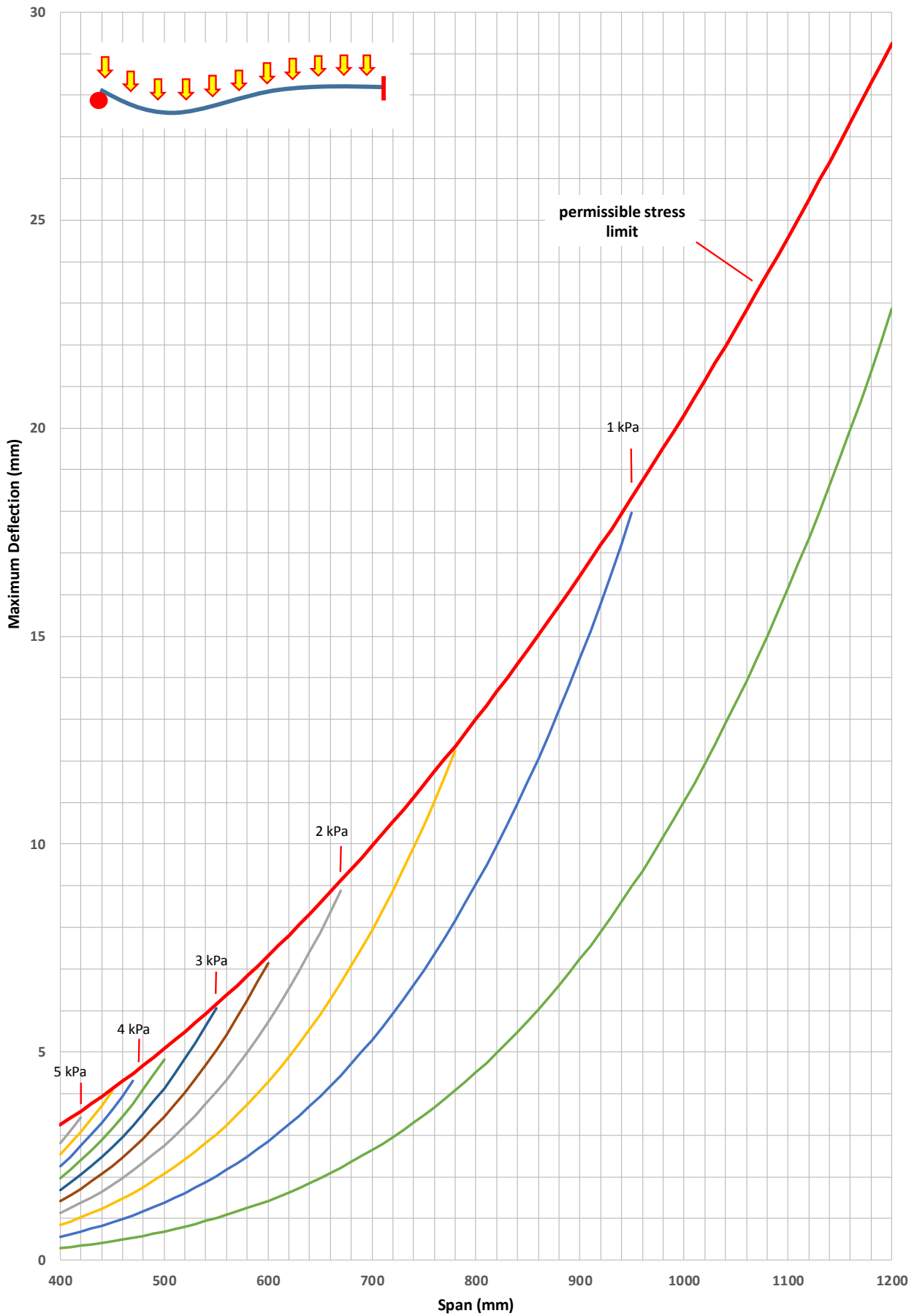
Nominal: 4 mm Symonite with 0.5 mm thick aluminium skins
 Single span: simple support / simple support



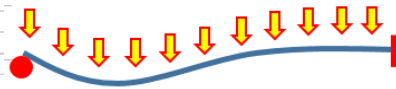
4		mm	Nominal thickness	SYMONITE PANEL				Single span: simple support / simple support						Aluminium
Panel thickness ≥		3.909	mm	Measured plate stiffness 'D' =		245,196	Nmm	E =		68,900	MPa	Poisson's Ratio =		0.33
Thickness of aluminium skins ≥		0.514	mm	Aluminium permissible stress =		71	MPa							
Panel weight =		6.66	kg/m ²							Maximum deflection (mm)		Defn.		
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	45.10	
970												23.51	46.05	
980												24.49	47.00	
990												25.51	47.97	
1000												26.55	48.94	
1010												27.63	49.92	
1020												28.74	50.92	
1030												29.88	51.92	
1040												31.06	52.93	
1050												32.27	53.96	
1060												33.52	54.99	
1070												34.80	56.03	
1080												36.12	57.08	
1090												37.48	58.14	
1100												38.87	59.22	
1110												40.31	60.30	
1120												41.78	61.39	
1130												43.29	62.49	
1140												44.85	63.60	
1150												46.44	64.72	
1160												48.08	65.85	
1170												49.76	66.99	
1180												51.48	68.14	
1190												53.25	69.30	
1200												55.06	70.47	



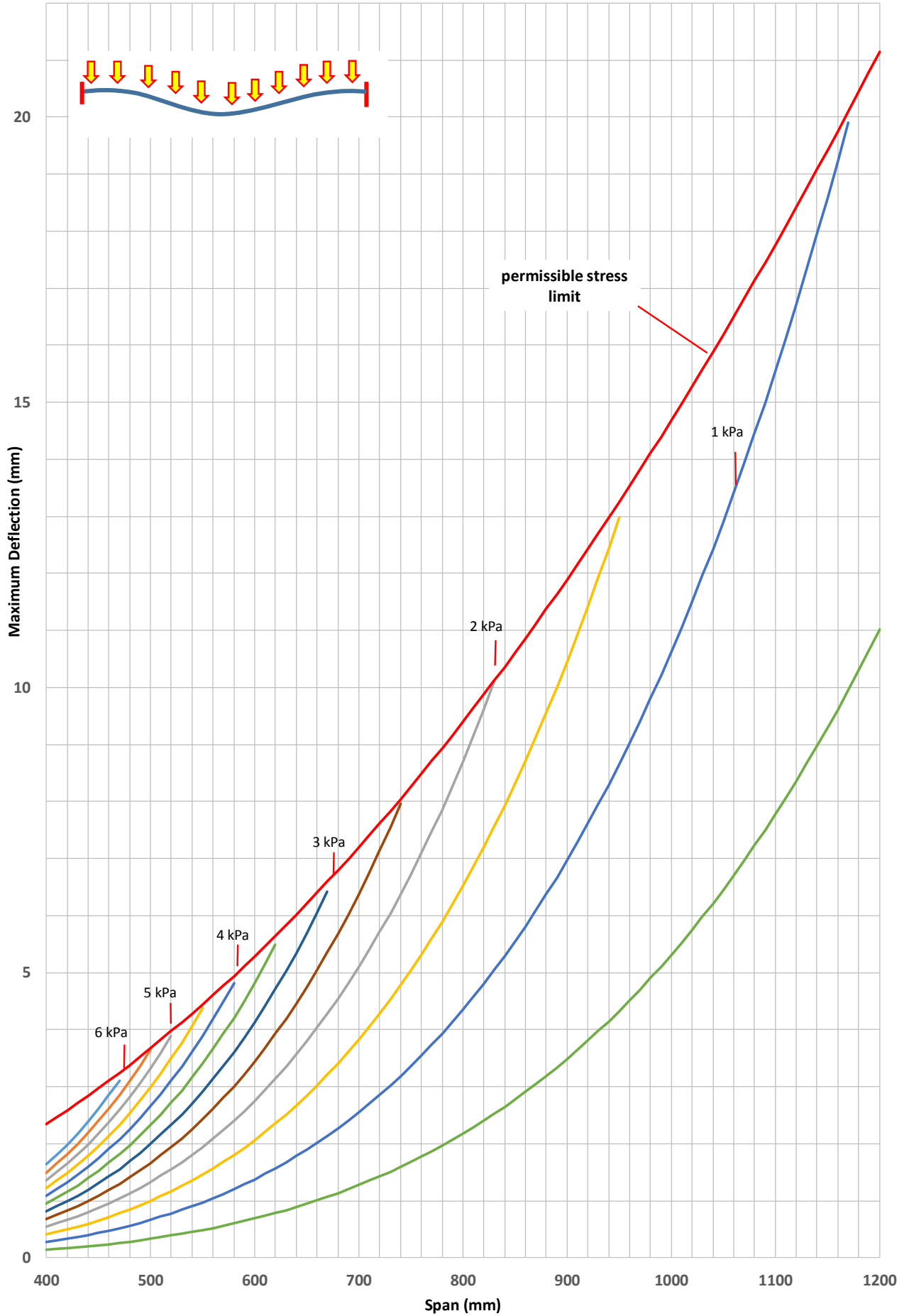
Nominal: 4 mm Symonite with 0.5 mm thick aluminium skins
 Single span: simple support / fixed support



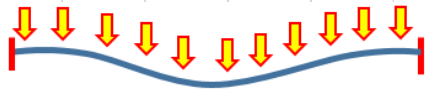
4	mm	Nominal thickness	SYMONITE PANEL										Single span: simple support / fixed support													
		Panel thickness ≥ 3.909	mm											Measured plate stiffness 'D' = 245,196	Nmm											Aluminium
		Thickness of aluminium skins ≥ 0.514	mm											Aluminium permissible stress = 71	MPa											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		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													



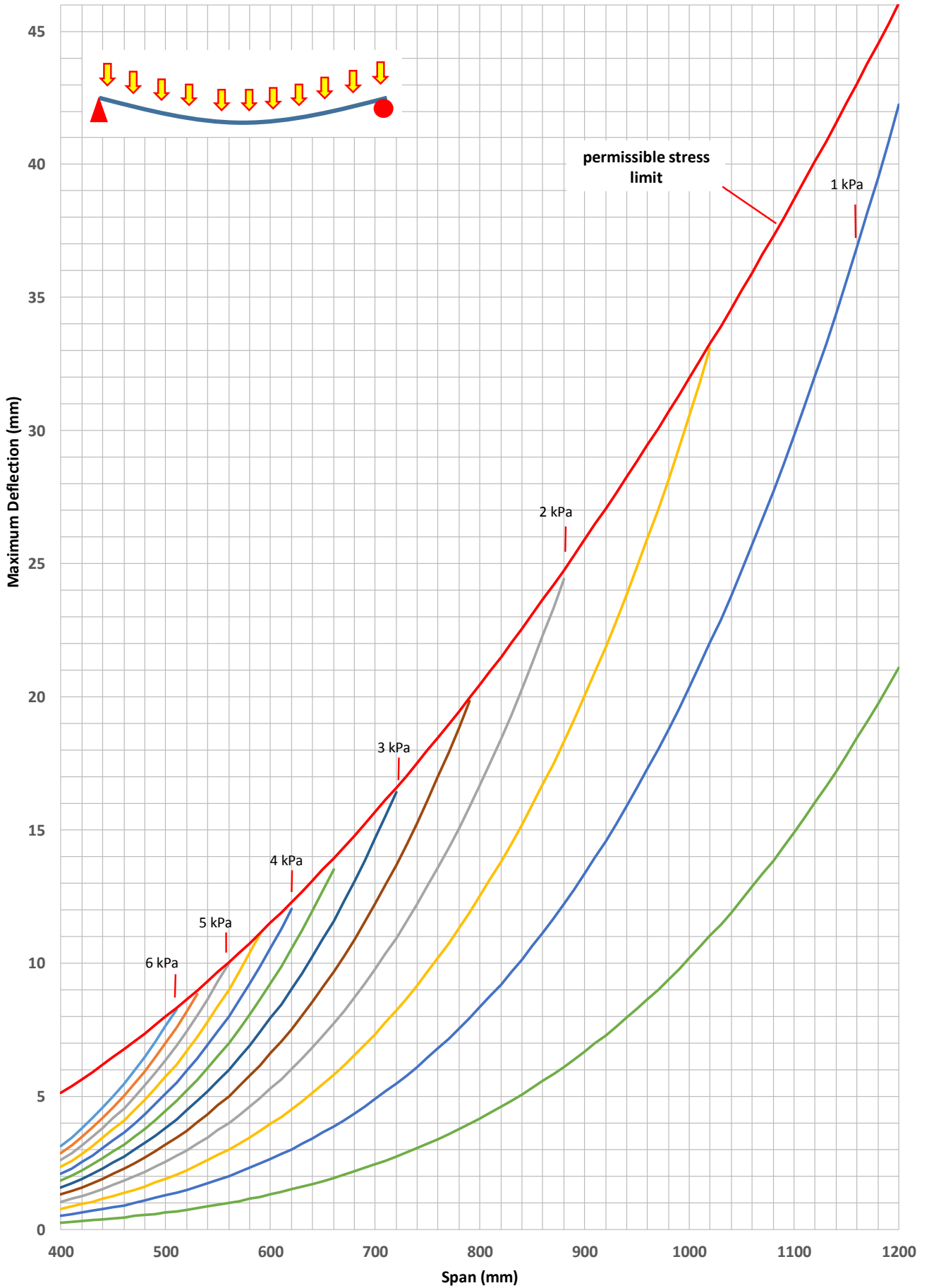
Nominal: 4 mm Symonite with 0.5 mm thick aluminium skins
 Single span: fixed support / fixed support



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		



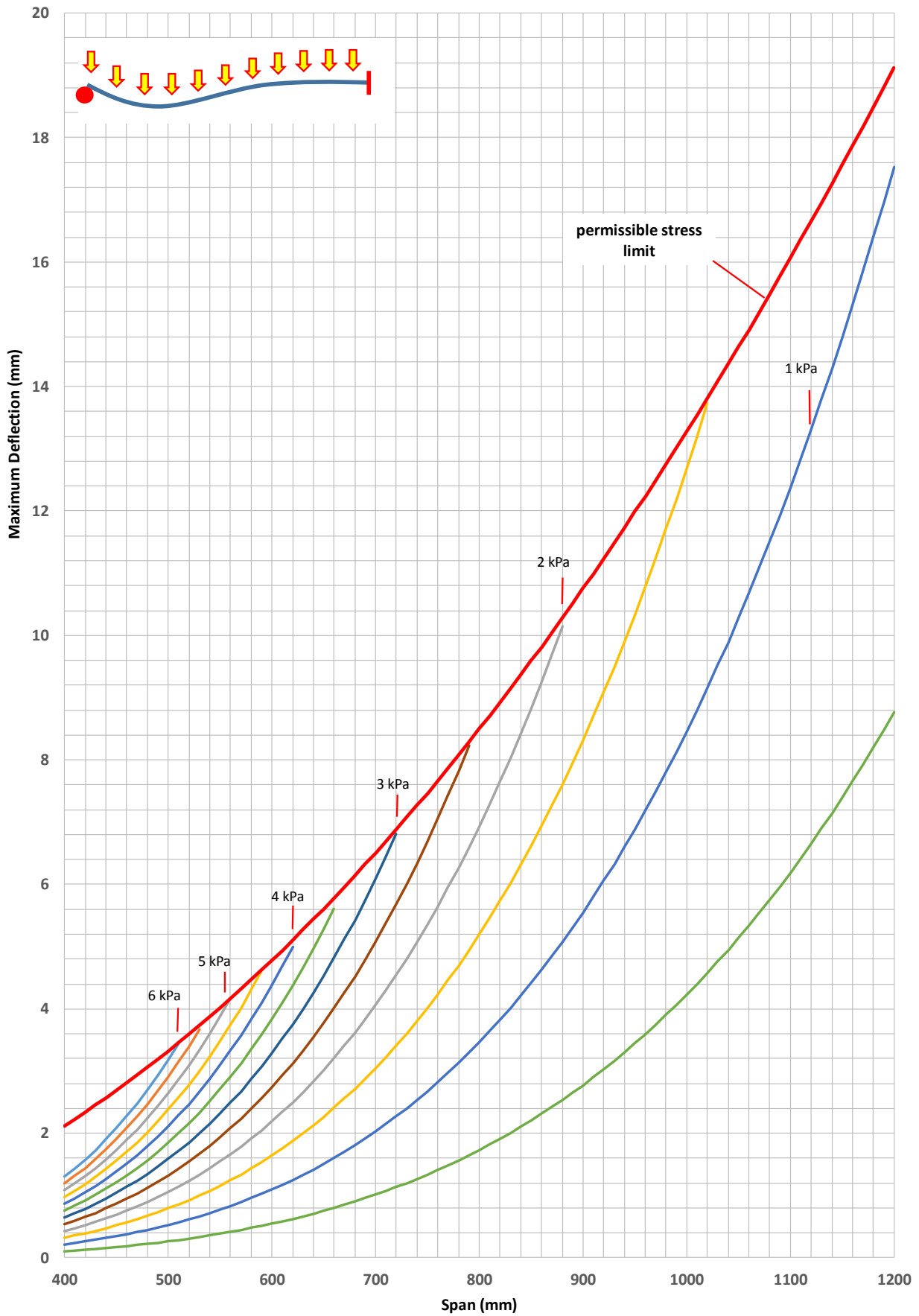
Nominal: 6 mm Symonite with 0.5 mm thick aluminium skins
 Single span: simple support / simple support



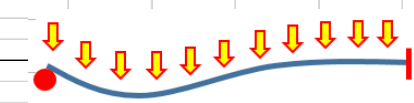
6		mm		Nominal thickness		SYMONITE PANEL		Single span: simple support / simple support					Aluminium		
Panel thickness \geq		5.982		mm		Measured plate stiffness 'D' =		639,243		Nmm		E =		68,900 MPa	
Thickness of aluminium skins \geq		0.528		mm		Aluminium permissible stress =		71		MPa		Poisson's Ratio =		0.33	
Panel weight =		9.42		kg/m ²		Maximum deflection (mm)					Defin.				
Span (mm)	6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1	0.5	at max. 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	6.39	25.33		
900									20.05	13.36	6.68	6.68	25.90		
910									20.95	13.97	6.98	6.98	26.48		
920									21.89	14.59	7.30	7.30	27.07		
930									22.86	15.24	7.62	7.62	27.66		
940									23.85	15.90	7.95	7.95	28.26		
950									24.89	16.59	8.30	8.30	28.86		
960									25.95	17.30	8.65	8.65	29.47		
970									27.05	18.03	9.02	9.02	30.09		
980									28.18	18.79	9.39	9.39	30.71		
990									29.35	19.57	9.78	9.78	31.34		
1000									30.55	20.37	10.18	10.18	31.98		
1010									31.79	21.20	10.60	10.60	32.62		
1020									33.07	22.05	11.02	11.02	33.27		
1030										22.93	11.46	11.46	33.93		
1040										23.83	11.91	11.91	34.59		
1050										24.76	12.38	12.38	35.26		
1060										25.72	12.86	12.86	35.93		
1070										26.70	13.35	13.35	36.61		
1080										27.71	13.86	13.86	37.30		
1090										28.75	14.38	14.38	38.00		
1100										29.82	14.91	14.91	38.70		
1110										30.92	15.46	15.46	39.40		
1120										32.05	16.03	16.03	40.12		
1130										33.21	16.61	16.61	40.84		
1140										34.40	17.20	17.20	41.56		
1150										35.63	17.81	17.81	42.29		
1160										36.88	18.44	18.44	43.03		
1170										38.17	19.08	19.08	43.78		
1180										39.49	19.75	19.75	44.53		
1190										40.85	20.42	20.42	45.29		
1200										42.24	21.12	21.12	46.05		



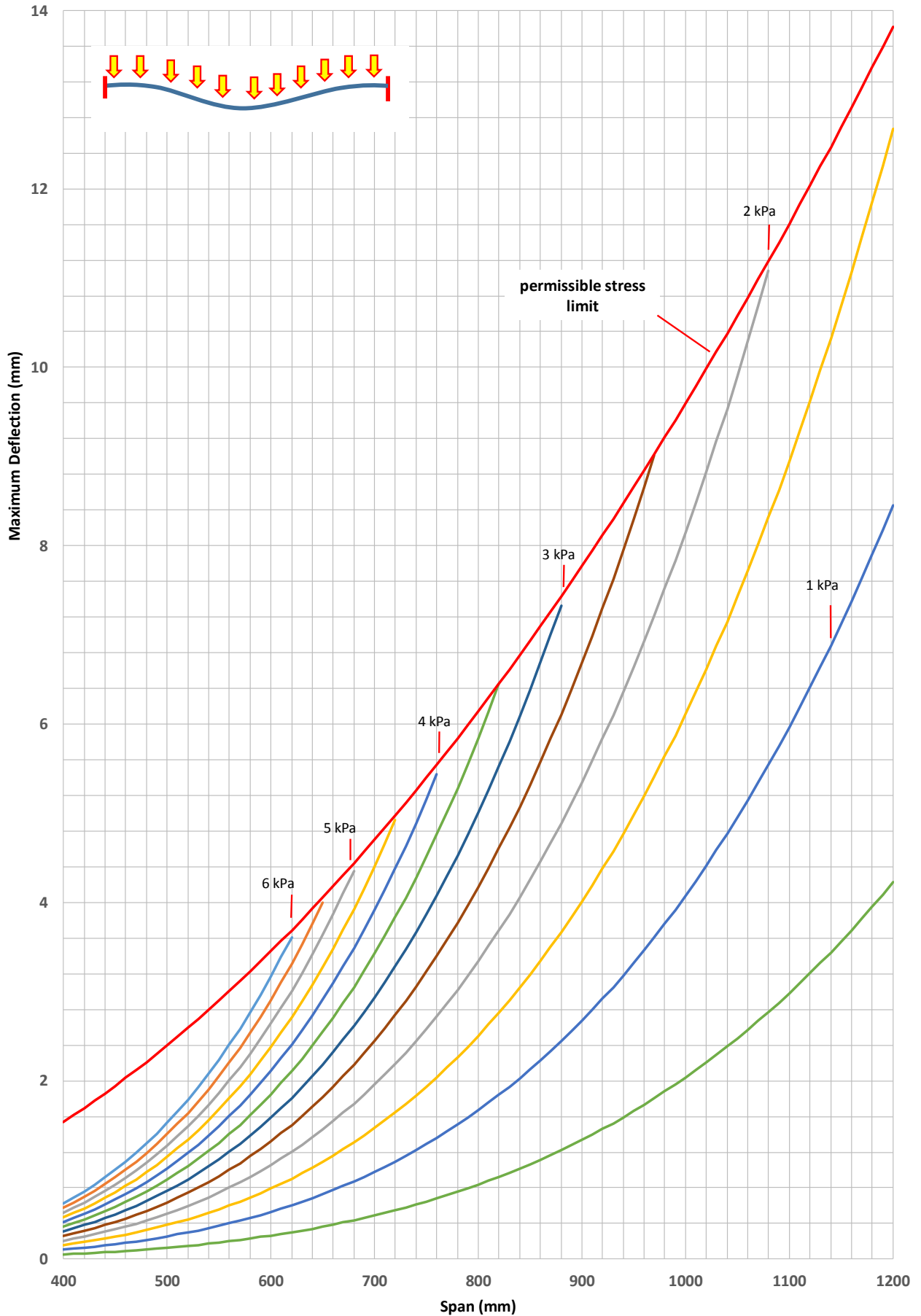
Nominal: 6 mm Symonite with 0.5 mm thick aluminium skins
 Single span: simple support / fixed support



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		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	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	0.55	4.78		
610				4.68	4.10	3.51	2.93	2.34	1.76	1.17	0.59	0.59	4.94		
620				5.00	4.37	3.75	3.12	2.50	1.87	1.25	0.62	0.62	5.10		
630					4.66	4.00	3.33	2.66	2.00	1.33	0.67	0.67	5.27		
640					4.97	4.26	3.55	2.84	2.13	1.42	0.71	0.71	5.44		
650					5.28	4.53	3.77	3.02	2.26	1.51	0.75	0.75	5.61		
660					5.62	4.81	4.01	3.21	2.41	1.60	0.80	0.80	5.78		
670						5.11	4.26	3.41	2.56	1.70	0.85	0.85	5.96		
680						5.42	4.52	3.62	2.71	1.81	0.90	0.90	6.14		
690						5.75	4.79	3.83	2.88	1.92	0.96	0.96	6.32		
700						6.09	5.08	4.06	3.05	2.03	1.02	1.02	6.51		
710						6.45	5.37	4.30	3.22	2.15	1.07	1.07	6.69		
720						6.82	5.68	4.54	3.41	2.27	1.14	1.14	6.88		
730							6.00	4.80	3.60	2.40	1.20	1.20	7.07		
740							6.34	5.07	3.80	2.54	1.27	1.27	7.27		
750							6.69	5.35	4.01	2.68	1.34	1.34	7.47		
760							7.05	5.64	4.23	2.82	1.41	1.41	7.67		
770							7.43	5.95	4.46	2.97	1.49	1.49	7.87		
780							7.82	6.26	4.69	3.13	1.56	1.56	8.08		
790							8.23	6.59	4.94	3.29	1.65	1.65	8.29		
800								6.93	5.20	3.46	1.73	1.73	8.50		
810								7.28	5.46	3.64	1.82	1.82	8.71		
820								7.65	5.73	3.82	1.91	1.91	8.93		
830								8.03	6.02	4.01	2.01	2.01	9.15		
840								8.42	6.31	4.21	2.10	2.10	9.37		
850								8.83	6.62	4.41	2.21	2.21	9.59		
860								9.25	6.94	4.63	2.31	2.31	9.82		
870								9.69	7.27	4.84	2.42	2.42	10.05		
880								10.14	7.61	5.07	2.54	2.54	10.28		
890									7.96	5.31	2.65	2.65	10.52		
900									8.32	5.55	2.77	2.77	10.75		
910									8.70	5.80	2.90	2.90	10.99		
920									9.09	6.06	3.03	3.03	11.24		
930									9.49	6.33	3.16	3.16	11.48		
940									9.90	6.60	3.30	3.30	11.73		
950									10.33	6.89	3.44	3.44	11.98		
960									10.77	7.18	3.59	3.59	12.24		
970									11.23	7.49	3.74	3.74	12.49		
980									11.70	7.80	3.90	3.90	12.75		
990									12.18	8.12	4.06	4.06	13.01		
1000									12.68	8.46	4.23	4.23	13.28		
1010									13.20	8.80	4.40	4.40	13.54		
1020									13.73	9.15	4.58	4.58	13.81		
1030										9.52	4.76	4.76	14.08		
1040										9.89	4.95	4.95	14.36		
1050										10.28	5.14	5.14	14.64		
1060										10.68	5.34	5.34	14.92		
1070										11.08	5.54	5.54	15.20		
1080										11.50	5.75	5.75	15.49		
1090										11.94	5.97	5.97	15.77		
1100										12.38	6.19	6.19	16.06		
1110										12.84	6.42	6.42	16.36		
1120										13.31	6.65	6.65	16.65		
1130										13.79	6.89	6.89	16.95		
1140										14.28	7.14	7.14	17.25		
1150										14.79	7.39	7.39	17.56		
1160										15.31	7.66	7.66	17.86		
1170										15.85	7.92	7.92	18.17		
1180										16.39	8.20	8.20	18.49		
1190										16.96	8.48	8.48	18.80		
1200										17.53	8.77	8.77	19.12		



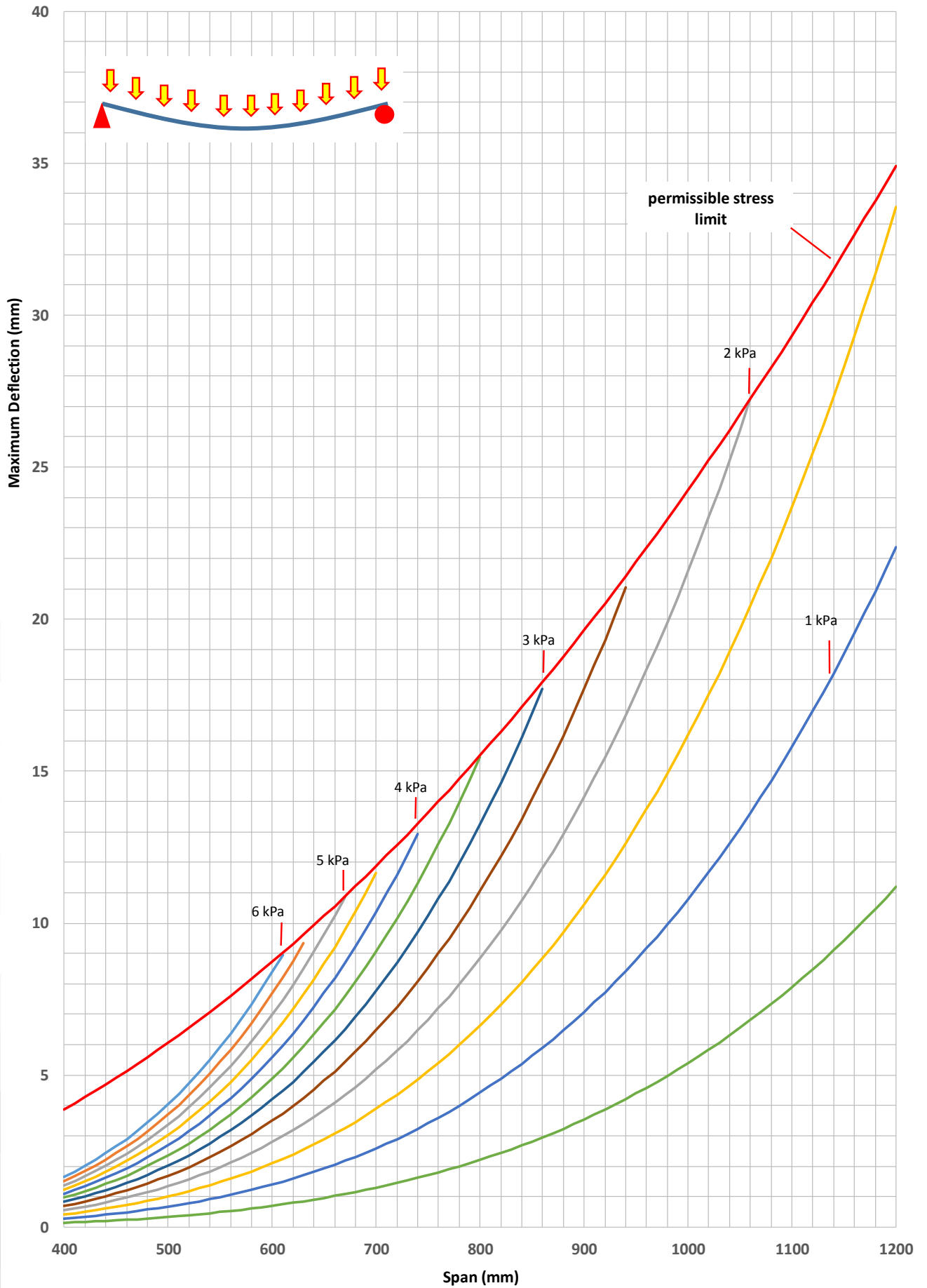
Nominal: 6 mm Symonite with 0.5 mm thick aluminium skins
 Single span: fixed support / fixed support



6 mm		Nominal thickness		SYMONITE PANEL		Single span: fixed support / fixed support							Aluminium	
Panel thickness ≥ 5.982 mm		mm		Measured plate stiffness 'D' = 639,243 Nmm		E = 68,900 MPa						Poisson's Ratio = 0.33		
Thickness of aluminium skins ≥ 0.528 mm		mm		Aluminium permissible stress = 71 MPa										
Panel weight = 9.42 kg/m ²														
Maximum deflection (mm)													Defn.	
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	0.63	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	0.76	7.60	
900							6.68	5.35	4.01	2.67	1.34	0.77	7.77	
910							6.98	5.59	4.19	2.79	1.40	0.79	7.94	
920							7.30	5.84	4.38	2.92	1.46	0.81	8.12	
930							7.62	6.09	4.57	3.05	1.52	0.83	8.30	
940							7.95	6.36	4.77	3.18	1.59	0.84	8.48	
950							8.30	6.64	4.98	3.32	1.66	0.86	8.66	
960							8.65	6.92	5.19	3.46	1.73	0.88	8.84	
970							9.02	7.21	5.41	3.61	1.80	0.90	9.03	
980								7.52	5.64	3.76	1.88	0.92	9.21	
990								7.83	5.87	3.91	1.96	0.94	9.40	
1000								8.15	6.11	4.07	2.04	0.95	9.59	
1010								8.48	6.36	4.24	2.12	0.97	9.79	
1020								8.82	6.61	4.41	2.20	0.98	9.98	
1030								9.17	6.88	4.59	2.29	1.01	10.18	
1040								9.53	7.15	4.77	2.38	1.03	10.38	
1050								9.90	7.43	4.95	2.48	1.05	10.58	
1060								10.29	7.71	5.14	2.57	1.07	10.78	
1070								10.68	8.01	5.34	2.67	1.09	10.98	
1080								11.08	8.31	5.54	2.77	1.11	11.19	
1090									8.63	5.75	2.88	1.14	11.40	
1100									8.95	5.96	2.98	1.16	11.61	
1110									9.28	6.18	3.09	1.18	11.82	
1120									9.62	6.41	3.21	1.20	12.03	
1130									9.96	6.64	3.32	1.22	12.25	
1140									10.32	6.88	3.44	1.24	12.47	
1150									10.69	7.13	3.56	1.26	12.69	
1160									11.06	7.38	3.69	1.28	12.91	
1170									11.45	7.63	3.82	1.30	13.13	
1180									11.85	7.90	3.95	1.32	13.36	
1190									12.25	8.17	4.08	1.34	13.59	
1200									12.67	8.45	4.22	1.36	13.82	



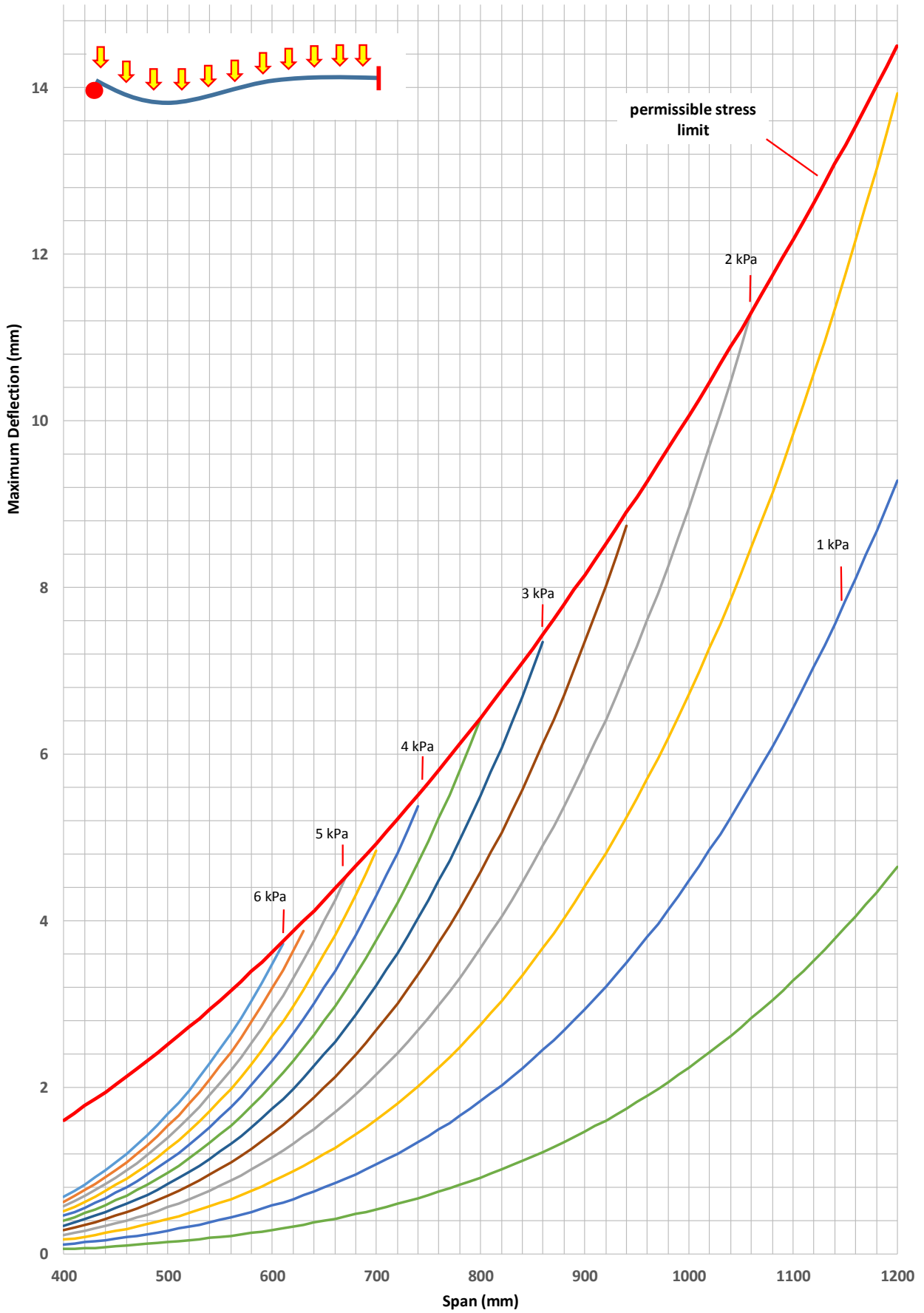
Nominal: 8 mm Symonite with 0.5 mm thick aluminium skins
 Single span: simple support / simple support



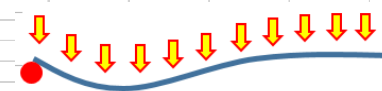
8	mm	Nominal thickness SYMONITE PANEL				Single span: simple support / simple support								
	Panel thickness ≥	7.891	mm			Measured plate stiffness 'D' =				1,207,206	Nmm		Aluminium	
	Thickness of aluminium skins ≥	0.516	mm			Aluminium permissible stress =				71	MPa	E =	68,900 MPa	
	Panel weight =	11.56	kg/m ²										Poisson's Ratio =	0.33
						Maximum deflection (mm)						Defln.		
Span (mm)						Pressure (kPa)						at max.		
		6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1	0.5	stress
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	7.66	6.96	4.64	2.32	15.91	
820						14.63	12.19	9.75	7.31	7.31	4.88	2.44	16.30	
830						15.36	12.80	10.24	7.68	7.68	5.12	2.56	16.70	
840						16.11	13.43	10.74	8.06	8.06	5.37	2.69	17.11	
850						16.89	14.08	11.26	8.45	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	



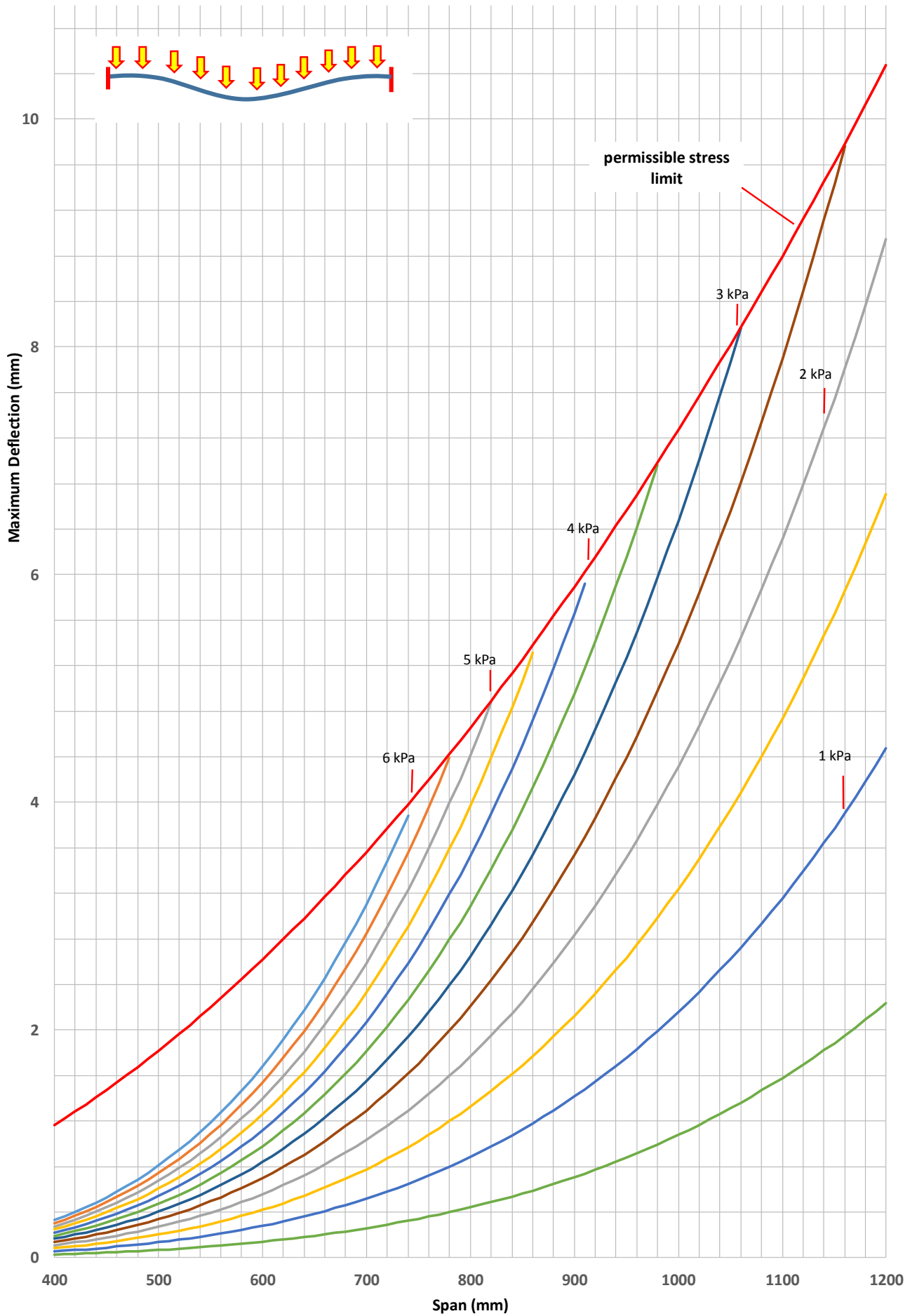
Nominal: 8 mm Symonite with 0.5 mm thick aluminium skins
 Single span: simple support / fixed support



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		E =		68,900		MPa	
		Thickness of aluminium skins ≥		0.516		mm		Aluminium permissible stress =		71		MPa		Poisson's Ratio =		0.33					
		Panel weight =		11.56		kg/m ²															
		Maximum deflection (mm)										Defln. at max. stress									
Span (mm)	Pressure (kPa)												Defln. 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	1.17	7.27								
860							7.35	6.12	4.90	3.67	2.45	1.22	7.44								
870								6.41	5.13	3.85	2.57	1.28	7.62								
880								6.71	5.37	4.03	2.69	1.34	7.79								
890								7.02	5.62	4.21	2.81	1.40	7.97								
900								7.34	5.88	4.41	2.94	1.47	8.15								
910								7.68	6.14	4.61	3.07	1.54	8.33								
920								8.02	6.42	4.81	3.21	1.60	8.52								
930								8.37	6.70	5.02	3.35	1.67	8.70								
940								8.74	6.99	5.24	3.50	1.75	8.89								
950									7.29	5.47	3.65	1.82	9.08								
960									7.61	5.70	3.80	1.90	9.28								
970									7.93	5.95	3.96	1.98	9.47								
980									8.26	6.20	4.13	2.07	9.67								
990									8.60	6.45	4.30	2.15	9.86								
1000									8.96	6.72	4.48	2.24	10.06								
1010									9.32	6.99	4.66	2.33	10.27								
1020									9.69	7.27	4.85	2.42	10.47								
1030									10.08	7.56	5.04	2.52	10.68								
1040									10.48	7.86	5.24	2.62	10.89								
1050									10.89	8.16	5.44	2.72	11.10								
1060									11.31	8.48	5.65	2.83	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	

