



SC804 Loading Tables

SC804
Material Specification
Specific Gravity: 1.38 ± 0.02
Volume Solids: 69% ± 3%

Nullifire
Smart Protection

4-sided Columns - Critical Temperature: 550°C

Section Factor up to m ¹	30 minutes	60 minutes	90 minutes	120 minutes	Section Factor up to m ¹	30 minutes	60 minutes	90 minutes	120 minutes
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)		DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
50	0.198	0.198	0.585	1.233	250	0.198	0.709	1.962	
55	0.198	0.201	0.610	1.355	255	0.198	0.722	2.004	
60	0.198	0.214	0.635	1.477	260	0.198	0.735	2.043	
65	0.198	0.227	0.660	1.537	265	0.198	0.748	2.081	
70	0.198	0.240	0.685	1.582	270	0.198	0.761	2.120	
75	0.198	0.253	0.710	1.627	275	0.198	0.774	2.159	
80	0.198	0.266	0.736	1.672	280	0.198	0.788	2.198	
85	0.198	0.279	0.761	1.717	285	0.198	0.801	2.237	
90	0.198	0.292	0.786	1.762	290	0.198	0.821	2.275	
95	0.198	0.305	0.811	1.807	295	0.203	0.870	2.314	
100	0.198	0.318	0.846	1.852	300	0.211	0.919	2.353	
105	0.198	0.331	0.880	1.897	305	0.220	0.969	2.392	
110	0.198	0.344	0.915	1.942	310	0.229	1.018	2.431	
115	0.198	0.357	0.949	1.987	315	0.238	1.067	2.469	
120	0.198	0.370	0.984	2.023	320	0.247	1.117	2.508	
125	0.198	0.383	1.018	2.056	325	0.256	1.166	2.547	
130	0.198	0.396	1.053	2.090	330	0.265	1.215	2.586	
135	0.198	0.409	1.087	2.123	335	0.274	1.264	2.625	
140	0.198	0.423	1.122	2.157	340	0.283	1.314	2.664	
145	0.198	0.436	1.156	2.190	345	0.292	1.363	2.702	
150	0.198	0.449	1.191	2.224	350	0.301	1.412	2.741	
155	0.198	0.462	1.225	2.257	355	0.31	1.462	2.780	
160	0.198	0.475	1.260	2.291	360	0.319	1.508		
165	0.198	0.488	1.294	2.324	365	0.327	1.544		
170	0.198	0.501	1.329	2.358	370	0.336	1.580		
175	0.198	0.514	1.363	2.391	375	0.345	1.616		
180	0.198	0.527	1.398	2.425					
185	0.198	0.540	1.432	2.458					
190	0.198	0.553	1.467	2.492					
195	0.198	0.566	1.501	2.525					
200	0.198	0.579	1.543	2.559					
205	0.198	0.592	1.585	2.592					
210	0.198	0.605	1.627	2.626					
215	0.198	0.618	1.669	2.659					
220	0.198	0.631	1.711	2.693					
225	0.198	0.644	1.753	2.726					
230	0.198	0.657	1.795	2.760					
235	0.198	0.670	1.837	2.793					
240	0.198	0.683	1.879						
245	0.198	0.696	1.920						

For the protection of RHS and CHS hollow section, Nullifire recommend the use of Nullifire SC801.

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request.



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3-sided Beams - Critical Temperature: 620°C

Section Factor up to m ¹	30 minutes	60 minutes	90 minutes	120 minutes	Section Factor up to m ¹	30 minutes	60 minutes	90 minutes	120 minutes
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)		DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
50	0.226	0.226	0.384	0.790	250	0.226	0.587	1.329	
55	0.226	0.226	0.408	0.820	255	0.226	0.598	1.353	
60	0.226	0.226	0.432	0.850	260	0.226	0.610	1.376	
65	0.226	0.226	0.456	0.881	265	0.226	0.621	1.400	
70	0.226	0.226	0.480	0.911	270	0.226	0.632	1.423	
75	0.226	0.226	0.504	0.942	275	0.226	0.644	1.447	
80	0.226	0.226	0.527	0.972	280	0.226	0.655	1.470	
85	0.226	0.226	0.551	1.002	285	0.226	0.666	1.494	
90	0.226	0.226	0.575	1.033	290	0.226	0.678	1.517	
95	0.226	0.235	0.599	1.063	295	0.226	0.689	1.541	
100	0.226	0.246	0.623	1.094	300	0.226	0.700	1.564	
105	0.226	0.258	0.647	1.124	305	0.226	0.712	1.588	
110	0.226	0.269	0.671	1.154	310	0.226	0.723	1.612	
115	0.226	0.280	0.695	1.185	315	0.226	0.735	1.636	
120	0.226	0.292	0.718	1.215	320	0.226	0.746	1.660	
125	0.226	0.303	0.742	1.245	325	0.226	0.757	1.684	
130	0.226	0.314	0.766	1.276	330	0.226	0.769	1.707	
135	0.226	0.326	0.790	1.306	335	0.226	0.780	1.731	
140	0.226	0.337	0.814	1.337					
145	0.226	0.348	0.837	1.367					
150	0.226	0.360	0.861	1.397					
155	0.226	0.371	0.884	1.428					
160	0.226	0.382	0.908	1.458					
165	0.226	0.394	0.931	1.488					
170	0.226	0.405	0.955	1.519					
175	0.226	0.417	0.978	1.570					
180	0.226	0.428	1.001	1.635					
185	0.226	0.439	1.025	1.699					
190	0.226	0.451	1.048	1.764					
195	0.226	0.462	1.072	1.829					
200	0.226	0.473	1.095	1.893					
205	0.226	0.485	1.119	1.958					
210	0.226	0.496	1.142	2.023					
215	0.226	0.507	1.165	2.088					
220	0.226	0.519	1.189	2.152					
225	0.226	0.530	1.212	2.217					
230	0.226	0.541	1.236						
235	0.226	0.553	1.259						
240	0.226	0.564	1.283						
245	0.226	0.576	1.306						

For the protection of RHS and CHS hollow section, Nullifire recommend the use of Nullifire SC801.

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4-sided Beams - Critical Temperature: 550°C

Section Factor up to m ¹	30 minutes	60 minutes	90 minutes	120 minutes	Section Factor up to m ¹	30 minutes	60 minutes	90 minutes	120 minutes
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)		DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
50	0.198	0.198	0.585	1.233	250	0.198	0.709	1.962	
55	0.198	0.201	0.610	1.355	255	0.198	0.722	2.004	
60	0.198	0.214	0.635	1.477	260	0.198	0.735	2.043	
65	0.198	0.227	0.660	1.537	265	0.198	0.748	2.081	
70	0.198	0.240	0.685	1.582	270	0.198	0.761	2.120	
75	0.198	0.253	0.710	1.627	275	0.198	0.774	2.159	
80	0.198	0.266	0.736	1.672	280	0.198	0.788	2.198	
85	0.198	0.279	0.761	1.717	285	0.198	0.801		
90	0.198	0.292	0.786	1.762	290	0.198	0.821		
95	0.198	0.305	0.811	1.807	295	0.203	0.870		
100	0.198	0.318	0.846	1.852	300	0.211	0.919		
105	0.198	0.331	0.880	1.897	305	0.220	0.969		
110	0.198	0.344	0.915	1.942	310	0.229	1.018		
115	0.198	0.357	0.949	1.987	315	0.238	1.067		
120	0.198	0.370	0.984	2.023	320	0.247	1.117		
125	0.198	0.383	1.018	2.056	325	0.256	1.166		
130	0.198	0.396	1.053	2.090	330	0.265	1.215		
135	0.198	0.409	1.087	2.123	335	0.274	1.264		
140	0.198	0.423	1.122	2.157	340	0.283	1.314		
145	0.198	0.436	1.156	2.190	345	0.292	1.363		
150	0.198	0.449	1.191	2.224	350	0.301	1.412		
155	0.198	0.462	1.225		355	0.31	1.462		
160	0.198	0.475	1.260		360	0.319	1.508		
165	0.198	0.488	1.294		365	0.327	1.544		
170	0.198	0.501	1.329		370	0.336	1.580		
175	0.198	0.514	1.363		375	0.345	1.616		
180	0.198	0.527	1.398						
185	0.198	0.540	1.432						
190	0.198	0.553	1.467						
195	0.198	0.566	1.501						
200	0.198	0.579	1.543						
205	0.198	0.592	1.585						
210	0.198	0.605	1.627						
215	0.198	0.618	1.669						
220	0.198	0.631	1.711						
225	0.198	0.644	1.753						
230	0.198	0.657	1.795						
235	0.198	0.670	1.837						
240	0.198	0.683	1.879						
245	0.198	0.696	1.920						

For the protection of RHS and CHS hollow section, Nullifire recommend the use of Nullifire SC801.

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4-sided Hollow Columns - Critical Temperature: 520°C

Section Factor up to m ¹	30 minutes	60 minutes	90 minutes	Section Factor up to m ¹	30 minutes	60 minutes	90 minutes
	DFT (mm)	DFT (mm)	DFT (mm)		DFT (mm)	DFT (mm)	DFT (mm)
40	0.158	0.578	1.195	225	1.027	3.046	-
45	0.158	0.643	1.423	230	1.073	3.085	-
50	0.158	0.707	1.743	235	1.120	3.125	-
55	0.158	0.772	2.083	240	1.166	3.164	-
60	0.158	0.837	2.424	245	1.212	3.203	-
65	0.158	0.901	2.765	250	1.258	3.242	-
70	0.158	0.966	2.823	255	1.304	3.281	-
75	0.158	1.031	2.880	260	1.350	3.320	-
80	0.158	1.095	2.938	265	1.396	3.359	-
85	0.158	1.160	2.996	270	1.442	3.398	-
90	0.158	1.224	3.054	275	1.476	3.437	-
95	0.158	1.289	3.111	280	1.491	3.476	-
100	0.158	1.354	3.169	285	1.507	3.515	-
105	0.158	1.418	3.227	290	1.522	3.554	-
110	0.158	1.486	3.284	295	1.537	3.594	-
115	0.158	1.567	3.342	300	1.552	3.633	-
120	0.158	1.648	3.400	305	1.568	3.672	-
125	0.158	1.729	3.458	310	1.583	3.711	-
130	0.158	1.810	3.515	315	1.598	3.750	-
135	0.197	1.891	3.573	320	1.613	3.789	-
140	0.243	1.972	3.631	325	1.628	3.828	-
145	0.289	2.053	3.688	330	1.644	3.867	-
150	0.336	2.134	3.746	335	1.659	3.906	-
155	0.382	2.215	3.804	340	1.674	3.945	-
160	0.428	2.296	3.861	345	1.689	3.984	-
165	0.474	2.377	3.919	350	1.705	4.023	-
170	0.520	2.457	3.977	355	1.720	4.063	-
175	0.566	2.538	4.035	360	1.735	4.102	-
180	0.612	2.619	4.092	365	1.750	4.141	-
185	0.658	2.700	4.150	370	1.766	4.180	-
190	0.704	2.773	4.208	375	1.781	4.219	-
195	0.751	2.812	4.265	380	1.796	4.258	-
200	0.797	2.851	-	385	1.811	4.297	-
205	0.843	2.890	-	390	1.827	-	-
210	0.889	2.929	-	395	1.842	-	-
215	0.935	2.968	-	400	1.857	-	-
220	0.981	3.007	-	405	1.872	-	-

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Specific Gravity: 1.38 ± 0.02
Volume Solids: 69% ± 3%

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4-sided Hollow Beams - Critical Temperature: 520°C

Section Factor up to m ¹	30 minutes	60 minutes	90 minutes	Section Factor up to m ¹	30 minutes	60 minutes	90 minutes
	DFT (mm)	DFT (mm)	DFT (mm)		DFT (mm)	DFT (mm)	DFT (mm)
40	0.158	0.578	1.195	225	1.027	3.046	-
45	0.158	0.643	1.423	230	1.073	3.085	-
50	0.158	0.707	1.743	235	1.120	3.125	-
55	0.158	0.772	2.083	240	1.166	3.164	-
60	0.158	0.837	2.424	245	1.212	3.203	-
65	0.158	0.901	2.765	250	1.258	3.242	-
70	0.158	0.966	2.823	255	1.304	3.281	-
75	0.158	1.031	2.880	260	1.350	3.320	-
80	0.158	1.095	2.938	265	1.396	3.359	-
85	0.158	1.160	2.996	270	1.442	3.398	-
90	0.158	1.224	3.054	275	1.476	3.437	-
95	0.158	1.289	3.111	280	1.491	3.476	-
100	0.158	1.354	3.169	285	1.507	3.515	-
105	0.158	1.418	3.227	290	1.522	3.554	-
110	0.158	1.486	3.284	295	1.537	3.594	-
115	0.158	1.567	3.342	300	1.552	3.633	-
120	0.158	1.648	3.400	305	1.568	3.672	-
125	0.158	1.729	3.458	310	1.583	3.711	-
130	0.158	1.810	3.515	315	1.598	3.750	-
135	0.197	1.891	3.573	320	1.613	3.789	-
140	0.243	1.972	3.631	325	1.628	3.828	-
145	0.289	2.053	3.688	330	1.644	3.867	-
150	0.336	2.134	3.746	335	1.659	3.906	-
155	0.382	2.215	3.804	340	1.674	3.945	-
160	0.428	2.296	3.861	345	1.689	3.984	-
165	0.474	2.377	3.919	350	1.705	4.023	-
170	0.520	2.457	3.977	355	1.720	4.063	-
175	0.566	2.538	4.035	360	1.735	4.102	-
180	0.612	2.619	4.092	365	1.750	4.141	-
185	0.658	2.700	4.150	370	1.766	4.180	-
190	0.704	2.773	4.208	375	1.781	4.219	-
195	0.751	2.812	4.265	380	1.796	4.258	-
200	0.797	2.851	-	385	1.811	4.297	-
205	0.843	2.890	-	390	1.827	-	-
210	0.889	2.929	-	395	1.842	-	-
215	0.935	2.968	-	400	1.857	-	-
220	0.981	3.007	-	405	1.872	-	-

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