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## CERTIFICATE OF APPROVAL

### No CF 5441

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This is to certify that, in accordance with  
TS00 General Requirements for Certification of Fire Protection Products  
The undermentioned products of

# SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Tower Works, Kestor Street, Bolton, BL2 2AL**  
**Tel: 01204 521771**

Have been assessed against the requirements of the Technical Schedule(s)  
denoted below and are approved for use subject to the conditions  
appended hereto:

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**CERTIFIED PRODUCT**  
**FIRETEX FX9500**

**TECHNICAL SCHEDULE**  
**TS15 Intumescent Coatings for  
Steelwork**

**Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited**

**Paul Duggan**  
**Certification Manager**



Issued: 17<sup>th</sup> June 2016  
Reissued: 16<sup>th</sup> June 2021  
Valid to: 15<sup>th</sup> June 2026

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## CERTIFICATE No CF 5441

### SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

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#### FIRETEX FX9500

1. This approval relates to the use of FIRETEX FX9500 for the fire protection of I section beams and columns, and circular and rectangular hollow columns. The precise scope is given in Tables 1 to 31 which show the total dry film thickness of FIRETEX FX9500 (excluding primer and top sealer) required to provide fire resistance periods in accordance with BS476: Part 21: 1987 of 15 minutes up to 150 minutes for differing sections and section factors.
2. This certification is provided to the client for their own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.
3. The products are approved on the basis of:
  - i) Initial type testing.
  - ii) A design appraisal against TS15.
  - iii) Certification of quality management system to ISO 9001: 2008.
  - iv) Inspection and surveillance of factory production control
  - v) Audit testing
4. The data referring to three-sided fire exposure of beams relate to beams supporting concrete floor slabs. Separate consideration is required where this is not the case.
5. The data shown is applicable to steel sections blast cleaned to ISO 8501-1 Sa 2<sup>1</sup>/<sub>2</sub> or equivalent and primed with a suitable and compatible primer. Specifications of surface preparations, primers and top sealers is available from FIRETEX FX9500 whose responsibility is to ensure that FIRETEX FX9500 is compatible for use in respect of both ambient and fire conditions. The total dry film thickness of primer and top sealer together should not exceed that tested.
6. Specific data given in the tables applies to horizontal, vertical, flexural and compression members supporting loads up to the maximum design loads specified in BS449: Part 2.
7. The approval relates to on going production. Product and/or its immediate packaging is identified with the manufacturers' name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.
8. The data shown in the tables is based on an assessment that complies with the criteria for acceptability now incorporated within the CERTIFIRE scheme.



# CERTIFICATE No CF 5441

## SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

Table 1 FIRETEX FX9500

I/H Section Beams 15 Minutes										
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
45	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
50	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
55	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
60	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
65	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
70	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
75	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
80	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
85	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
90	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
95	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
100	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
105	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
110	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
115	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
120	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
125	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
130	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
135	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
140	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
145	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
150	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
155	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
160	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
165	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
170	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
175	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
180	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
185	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
190	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
195	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
200	0.407	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
205	0.431	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
210	0.455	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
215	0.479	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
220	0.503	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
225	0.527	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
230	0.551	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
235	0.575	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
240	0.599	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
245	0.623	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
250	0.647	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
255	0.671	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
260	0.695	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
265	0.719	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
270	0.743	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
275	0.767	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
280	0.791	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
285	0.815	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
290	0.839	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
295	0.863	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
300	0.887	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
305	0.911	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
310	0.935	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391

Thickness is intumescent only. Results apply to I/H section beams with concrete slabs with 3 sided exposure.



**CERTIFICATE No CF 5441**  
**SHERWIN-WILLIAMS PROTECTIVE &**  
**MARINE COATINGS**

**Table 2 FIRETEX FX9500**

I/H Section Beams 30 Minutes										
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
45	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
50	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
55	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
60	0.403	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
65	0.449	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
70	0.496	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
75	0.543	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
80	0.589	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
85	0.636	0.395	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
90	0.682	0.431	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
95	0.729	0.467	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
100	0.775	0.503	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
105	0.822	0.539	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
110	0.868	0.576	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
115	0.915	0.612	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
120	0.961	0.648	0.424	0.391	0.391	0.391	0.391	0.391	0.391	0.391
125	1.008	0.684	0.458	0.391	0.391	0.391	0.391	0.391	0.391	0.391
130	1.054	0.720	0.492	0.391	0.391	0.391	0.391	0.391	0.391	0.391
135	1.101	0.756	0.526	0.391	0.391	0.391	0.391	0.391	0.391	0.391
140	1.147	0.792	0.560	0.391	0.391	0.391	0.391	0.391	0.391	0.391
145	1.194	0.829	0.594	0.391	0.391	0.391	0.391	0.391	0.391	0.391
150	1.240	0.865	0.628	0.391	0.391	0.391	0.391	0.391	0.391	0.391
155	1.287	0.901	0.662	0.409	0.391	0.391	0.391	0.391	0.391	0.391
160	1.333	0.937	0.696	0.442	0.391	0.391	0.391	0.391	0.391	0.391
165	1.380	0.973	0.730	0.475	0.391	0.391	0.391	0.391	0.391	0.391
170	1.426	1.009	0.764	0.508	0.391	0.391	0.391	0.391	0.391	0.391
175	1.473	1.046	0.799	0.541	0.391	0.391	0.391	0.391	0.391	0.391
180	1.519	1.082	0.833	0.574	0.391	0.391	0.391	0.391	0.391	0.391
185	1.566	1.118	0.867	0.607	0.391	0.391	0.391	0.391	0.391	0.391
190	1.612	1.154	0.901	0.640	0.391	0.391	0.391	0.391	0.391	0.391
195	1.659	1.190	0.935	0.673	0.391	0.391	0.391	0.391	0.391	0.391
200	1.705	1.226	0.969	0.706	0.399	0.391	0.391	0.391	0.391	0.391
205	1.752	1.263	1.003	0.739	0.431	0.391	0.391	0.391	0.391	0.391
210	1.798	1.299	1.037	0.772	0.463	0.391	0.391	0.391	0.391	0.391
215	1.845	1.335	1.071	0.805	0.495	0.391	0.391	0.391	0.391	0.391
220	1.891	1.371	1.105	0.838	0.527	0.391	0.391	0.391	0.391	0.391
225	1.938	1.407	1.139	0.871	0.560	0.391	0.391	0.391	0.391	0.391
230	1.984	1.443	1.173	0.904	0.592	0.391	0.391	0.391	0.391	0.391
235	2.031	1.480	1.207	0.937	0.624	0.391	0.391	0.391	0.391	0.391
240	2.077	1.516	1.241	0.970	0.656	0.391	0.391	0.391	0.391	0.391
245	2.122	1.552	1.276	1.003	0.689	0.391	0.391	0.391	0.391	0.391
250	2.167	1.588	1.310	1.036	0.721	0.391	0.391	0.391	0.391	0.391
255	2.212	1.624	1.344	1.069	0.753	0.391	0.391	0.391	0.391	0.391
260	2.257	1.660	1.378	1.102	0.785	0.391	0.391	0.391	0.391	0.391
265	2.302	1.696	1.412	1.135	0.818	0.391	0.391	0.391	0.391	0.391
270	2.346	1.733	1.446	1.168	0.850	0.391	0.391	0.391	0.391	0.391
275	2.391	1.769	1.480	1.201	0.882	0.391	0.391	0.391	0.391	0.391
280	2.436	1.805	1.514	1.234	0.914	0.402	0.391	0.391	0.391	0.391
285	2.481	1.841	1.548	1.267	0.947	0.435	0.391	0.391	0.391	0.391
290	2.526	1.877	1.582	1.300	0.979	0.469	0.391	0.391	0.391	0.391
295	2.571	1.913	1.616	1.333	1.011	0.503	0.391	0.391	0.391	0.391
300	2.616	1.950	1.650	1.366	1.043	0.536	0.399	0.391	0.391	0.391
305	2.661	1.986	1.684	1.399	1.076	0.570	0.431	0.391	0.391	0.391
310	2.705	2.022	1.719	1.432	1.108	0.604	0.463	0.391	0.391	0.391

Thickness is intumescent only. Results apply to I/H section beams with concrete slabs with 3 sided exposure.



# CERTIFICATE No CF 5441

## SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

Table 3 FIRETEX FX9500

I/H Section Beams 45 Minutes										
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
45	0.844	0.497	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
50	0.924	0.541	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
55	1.005	0.585	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
60	1.115	0.665	0.397	0.391	0.391	0.391	0.391	0.391	0.391	0.391
65	1.226	0.745	0.458	0.391	0.391	0.391	0.391	0.391	0.391	0.391
70	1.336	0.825	0.520	0.391	0.391	0.391	0.391	0.391	0.391	0.391
75	1.447	0.904	0.581	0.416	0.391	0.391	0.391	0.391	0.391	0.391
80	1.557	0.984	0.642	0.466	0.391	0.391	0.391	0.391	0.391	0.391
85	1.668	1.064	0.704	0.515	0.391	0.391	0.391	0.391	0.391	0.391
90	1.779	1.144	0.765	0.565	0.412	0.391	0.391	0.391	0.391	0.391
95	1.889	1.224	0.827	0.614	0.453	0.391	0.391	0.391	0.391	0.391
100	2.000	1.304	0.888	0.664	0.495	0.391	0.391	0.391	0.391	0.391
105	2.086	1.384	0.949	0.713	0.536	0.391	0.391	0.391	0.391	0.391
110	2.134	1.464	1.011	0.762	0.577	0.426	0.391	0.391	0.391	0.391
115	2.182	1.543	1.072	0.812	0.619	0.464	0.395	0.391	0.391	0.391
120	2.230	1.623	1.133	0.861	0.660	0.503	0.433	0.391	0.391	0.391
125	2.278	1.703	1.195	0.911	0.701	0.541	0.470	0.391	0.391	0.391
130	2.327	1.783	1.256	0.960	0.742	0.579	0.507	0.391	0.391	0.391
135	2.375	1.863	1.318	1.010	0.784	0.617	0.544	0.424	0.391	0.391
140	2.423	1.943	1.379	1.059	0.825	0.655	0.581	0.460	0.391	0.391
145	2.471	2.023	1.440	1.109	0.866	0.693	0.618	0.496	0.391	0.391
150	2.519	2.088	1.502	1.158	0.907	0.731	0.655	0.532	0.391	0.391
155	2.567	2.133	1.563	1.208	0.949	0.769	0.692	0.567	0.391	0.391
160	2.615	2.179	1.624	1.257	0.990	0.807	0.729	0.603	0.391	0.391
165	2.663	2.225	1.686	1.306	1.031	0.845	0.766	0.639	0.391	0.391
170	2.711	2.270	1.747	1.356	1.072	0.884	0.804	0.675	0.419	0.391
175	2.759	2.316	1.809	1.405	1.114	0.922	0.841	0.710	0.452	0.391
180	2.807	2.361	1.870	1.455	1.155	0.960	0.878	0.746	0.486	0.391
185	2.855	2.407	1.931	1.504	1.196	0.998	0.915	0.782	0.519	0.391
190	2.903	2.453	1.993	1.554	1.238	1.036	0.952	0.818	0.553	0.391
195	2.951	2.498	2.054	1.603	1.279	1.074	0.989	0.853	0.586	0.391
200	2.999	2.544	2.105	1.653	1.320	1.112	1.026	0.889	0.620	0.391
205	3.047	2.590	2.152	1.702	1.361	1.150	1.063	0.925	0.653	0.391
210	3.095	2.635	2.199	1.751	1.403	1.188	1.100	0.960	0.687	0.391
215	3.143	2.681	2.246	1.801	1.444	1.226	1.137	0.996	0.720	0.391
220	3.191	2.726	2.294	1.850	1.485	1.265	1.174	1.032	0.754	0.391
225	3.239	2.772	2.341	1.900	1.526	1.303	1.212	1.068	0.787	0.391
230	3.287	2.818	2.388	1.949	1.568	1.341	1.249	1.103	0.821	0.391
235	3.335	2.863	2.436	1.999	1.609	1.379	1.286	1.139	0.855	0.391
240	3.384	2.909	2.483	2.048	1.650	1.417	1.323	1.175	0.888	0.391
245	3.432	2.955	2.530	2.098	1.691	1.455	1.360	1.211	0.922	0.391
250	3.480	3.000	2.578	2.147	1.733	1.493	1.397	1.246	0.955	0.391
255	3.528	3.046	2.625	2.197	1.774	1.531	1.434	1.282	0.989	0.391
260	3.576	3.091	2.672	2.247	1.815	1.569	1.471	1.318	1.022	0.418
265	3.624	3.137	2.720	2.296	1.857	1.607	1.508	1.353	1.056	0.454
270	3.672	3.183	2.767	2.346	1.898	1.646	1.545	1.389	1.089	0.490
275	3.720	3.228	2.814	2.396	1.939	1.684	1.583	1.425	1.123	0.526
280	3.768	3.274	2.862	2.445	1.980	1.722	1.620	1.461	1.156	0.562
285	3.816	3.320	2.909	2.495	2.022	1.760	1.657	1.496	1.190	0.598
290	3.897	3.365	2.956	2.545	2.063	1.798	1.694	1.532	1.223	0.634
295	4.025	3.411	3.003	2.594	2.113	1.836	1.731	1.568	1.257	0.670
300	4.153	3.456	3.051	2.644	2.164	1.874	1.768	1.604	1.290	0.706
305	4.280	3.502	3.098	2.693	2.216	1.912	1.805	1.639	1.324	0.742
310	4.408	3.548	3.145	2.743	2.267	1.950	1.842	1.675	1.357	0.778

Thickness is intumescent only. Results apply to I/H section beams with concrete slabs with 3 sided exposure.

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# CERTIFICATE No CF 5441

## SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 4 FIRETEX FX9500**

I/H Section Beams 60 Minutes										
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
45	1.427	0.992	0.693	0.487	0.391	0.391	0.391	0.391	0.391	0.391
50	1.566	1.086	0.754	0.527	0.391	0.391	0.391	0.391	0.391	0.391
55	1.705	1.180	0.816	0.566	0.391	0.391	0.391	0.391	0.391	0.391
60	1.879	1.315	0.928	0.662	0.460	0.391	0.391	0.391	0.391	0.391
65	2.054	1.449	1.040	0.758	0.539	0.412	0.391	0.391	0.391	0.391
70	2.239	1.584	1.152	0.853	0.617	0.476	0.431	0.391	0.391	0.391
75	2.425	1.718	1.264	0.949	0.696	0.541	0.492	0.424	0.391	0.391
80	2.612	1.852	1.376	1.045	0.775	0.605	0.552	0.480	0.391	0.391
85	2.798	1.987	1.488	1.141	0.853	0.669	0.613	0.535	0.397	0.391
90	2.984	2.101	1.600	1.237	0.932	0.733	0.674	0.591	0.438	0.391
95	3.171	2.185	1.712	1.333	1.011	0.797	0.735	0.646	0.479	0.391
100	3.357	2.268	1.824	1.428	1.089	0.861	0.796	0.702	0.521	0.391
105	3.543	2.352	1.936	1.524	1.168	0.925	0.856	0.757	0.562	0.391
110	3.730	2.436	2.048	1.620	1.247	0.990	0.917	0.813	0.603	0.391
115	3.868	2.519	2.110	1.716	1.325	1.054	0.978	0.869	0.645	0.393
120	3.929	2.603	2.161	1.812	1.404	1.118	1.039	0.924	0.686	0.434
125	3.990	2.686	2.212	1.908	1.483	1.182	1.100	0.980	0.727	0.474
130	4.052	2.770	2.264	2.004	1.561	1.246	1.160	1.035	0.768	0.515
135	4.113	2.854	2.315	2.084	1.640	1.310	1.221	1.091	0.810	0.555
140	4.174	2.937	2.366	2.135	1.719	1.374	1.282	1.146	0.851	0.596
145	4.236	3.021	2.417	2.185	1.798	1.439	1.343	1.202	0.892	0.636
150	4.297	3.104	2.468	2.235	1.876	1.503	1.404	1.258	0.934	0.677
155	4.358	3.188	2.519	2.285	1.955	1.567	1.464	1.313	0.975	0.717
160	4.419	3.272	2.570	2.335	2.034	1.631	1.525	1.369	1.016	0.757
165	4.481	3.355	2.621	2.386	2.096	1.695	1.586	1.424	1.057	0.798
170	4.542	3.439	2.673	2.436	2.146	1.759	1.647	1.480	1.099	0.838
175	4.603	3.522	2.724	2.486	2.197	1.823	1.708	1.535	1.140	0.879
180	4.665	3.606	2.775	2.536	2.247	1.887	1.768	1.591	1.181	0.919
185	4.726	3.690	2.826	2.586	2.297	1.952	1.829	1.647	1.223	0.960
190	4.787	3.773	2.877	2.636	2.347	2.016	1.890	1.702	1.264	1.000
195	4.849	3.855	2.928	2.687	2.397	2.077	1.951	1.758	1.305	1.041
200	4.910	3.929	2.979	2.737	2.447	2.128	2.012	1.813	1.346	1.081
205	4.971	4.003	3.030	2.787	2.498	2.178	2.072	1.869	1.388	1.122
210	5.033	4.078	3.082	2.837	2.548	2.229	2.121	1.924	1.429	1.162
215	5.094	4.152	3.133	2.887	2.598	2.279	2.170	1.980	1.470	1.202
220	5.155	4.226	3.184	2.938	2.648	2.329	2.219	2.036	1.512	1.243
225	5.216	4.300	3.235	2.988	2.698	2.380	2.269	2.088	1.553	1.283
230	5.278	4.374	3.286	3.038	2.748	2.430	2.318	2.136	1.594	1.324
235	5.339	4.448	3.337	3.088	2.799	2.481	2.367	2.185	1.635	1.364
240	5.400	4.522	3.388	3.138	2.849	2.531	2.417	2.233	1.677	1.405
245	5.462	4.596	3.439	3.188	2.899	2.582	2.466	2.282	1.718	1.445
250	5.523	4.670	3.491	3.239	2.949	2.632	2.515	2.330	1.759	1.486
255	5.607	4.744	3.542	3.289	2.999	2.682	2.565	2.378	1.801	1.526
260	5.692	4.818	3.593	3.339	3.049	2.733	2.614	2.427	1.842	1.567
265	5.776	4.892	3.644	3.389	3.100	2.783	2.663	2.475	1.883	1.607
270	5.861	4.966	3.695	3.439	3.150	2.834	2.713	2.523	1.925	1.648
275	5.945	5.040	3.746	3.490	3.200	2.884	2.762	2.572	1.966	1.688
280	6.030	5.114	3.797	3.540	3.250	2.934	2.811	2.620	2.007	1.728
285	6.114	5.188	3.856	3.590	3.300	2.985	2.860	2.668	2.048	1.769
290	6.199	5.262	3.989	3.640	3.350	3.035	2.910	2.717	2.097	1.809
295	6.283	5.336	4.122	3.690	3.401	3.086	2.959	2.765	2.153	1.850
300	6.368	5.410	4.255	3.740	3.451	3.136	3.008	2.814	2.209	1.890
305	6.453	5.485	4.388	3.791	3.501	3.187	3.058	2.862	2.264	1.931
310	6.537	5.564	4.521	3.841	3.551	3.237	3.107	2.910	2.320	1.971

Thickness is intumescent only. Results apply to I/H section beams with concrete slabs with 3 sided exposure.

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# CERTIFICATE No CF 5441

## SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 5 FIRETEX FX9500**

I/H Section Beams 75 Minutes										
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
45	2.429	1.488	1.131	0.883	0.694	0.552	0.503	0.438	0.391	0.391
50	2.651	1.632	1.237	0.962	0.753	0.598	0.544	0.472	0.391	0.391
55	2.872	1.775	1.342	1.041	0.813	0.643	0.584	0.506	0.391	0.391
60	3.238	1.964	1.502	1.180	0.934	0.749	0.685	0.598	0.457	0.391
65	3.604	2.171	1.662	1.320	1.056	0.855	0.785	0.690	0.543	0.391
70	3.877	2.400	1.822	1.459	1.178	0.962	0.886	0.782	0.630	0.450
75	3.973	2.630	1.982	1.598	1.299	1.068	0.987	0.874	0.716	0.537
80	4.068	2.859	2.136	1.737	1.421	1.174	1.088	0.966	0.803	0.625
85	4.164	3.088	2.281	1.876	1.543	1.281	1.189	1.058	0.889	0.712
90	4.260	3.317	2.427	2.016	1.664	1.387	1.289	1.150	0.975	0.800
95	4.355	3.546	2.573	2.130	1.786	1.494	1.390	1.242	1.062	0.888
100	4.451	3.776	2.718	2.230	1.908	1.600	1.491	1.334	1.148	0.975
105	4.547	3.903	2.864	2.329	2.029	1.706	1.592	1.426	1.235	1.063
110	4.642	3.986	3.010	2.429	2.112	1.813	1.693	1.518	1.321	1.150
115	4.738	4.070	3.155	2.528	2.177	1.919	1.793	1.610	1.408	1.238
120	4.834	4.153	3.301	2.628	2.241	2.025	1.894	1.702	1.494	1.325
125	4.929	4.237	3.446	2.727	2.306	2.100	1.995	1.794	1.581	1.413
130	5.025	4.320	3.592	2.827	2.371	2.153	2.082	1.887	1.667	1.501
135	5.121	4.404	3.738	2.926	2.436	2.205	2.134	1.979	1.753	1.588
140	5.216	4.487	3.861	3.026	2.500	2.258	2.186	2.069	1.840	1.676
145	5.312	4.571	3.922	3.125	2.565	2.311	2.237	2.120	1.926	1.763
150	5.408	4.654	3.983	3.225	2.630	2.364	2.289	2.171	2.013	1.851
155	5.504	4.738	4.044	3.324	2.694	2.417	2.341	2.221	2.085	1.938
160	5.589	4.821	4.105	3.424	2.759	2.470	2.393	2.272	2.132	2.026
165	5.672	4.905	4.166	3.523	2.824	2.523	2.444	2.323	2.179	2.091
170	5.756	4.988	4.227	3.623	2.888	2.576	2.496	2.373	2.227	2.134
175	5.839	5.071	4.288	3.722	2.953	2.628	2.548	2.424	2.274	2.177
180	5.922	5.155	4.349	3.822	3.018	2.681	2.600	2.474	2.321	2.220
185	6.005	5.238	4.410	3.898	3.082	2.734	2.651	2.525	2.368	2.264
190	6.088	5.322	4.471	3.968	3.147	2.787	2.703	2.576	2.416	2.307
195	6.171	5.405	4.532	4.038	3.212	2.840	2.755	2.626	2.463	2.350
200	6.254	5.489	4.593	4.108	3.277	2.893	2.807	2.677	2.510	2.394
205	6.338	5.561	4.654	4.178	3.341	2.946	2.858	2.728	2.557	2.437
210	6.421	5.626	4.715	4.247	3.406	2.998	2.910	2.778	2.605	2.480
215	6.504	5.690	4.776	4.317	3.471	3.051	2.962	2.829	2.652	2.524
220	6.587	5.754	4.837	4.387	3.535	3.104	3.014	2.880	2.699	2.567
225	6.670	5.818	4.898	4.457	3.600	3.157	3.065	2.930	2.746	2.610
230	6.753	5.883	4.959	4.527	3.665	3.210	3.117	2.981	2.794	2.654
235	6.836	5.947	5.020	4.597	3.729	3.263	3.169	3.031	2.841	2.697
240	6.919	6.011	5.081	4.667	3.794	3.316	3.221	3.082	2.888	2.740
245	-	6.076	5.142	4.736	3.868	3.369	3.272	3.133	2.935	2.784
250	-	6.140	5.203	4.806	3.974	3.421	3.324	3.183	2.982	2.827
255	-	6.204	5.265	4.876	4.079	3.474	3.376	3.234	3.030	2.870
260	-	6.268	5.326	4.946	4.185	3.527	3.428	3.285	3.077	2.914
265	-	6.333	5.387	5.016	4.290	3.580	3.479	3.335	3.124	2.957
270	-	6.397	5.448	5.086	4.396	3.633	3.531	3.386	3.171	3.000
275	-	6.461	5.509	5.156	4.501	3.686	3.583	3.436	3.219	3.044
280	-	6.525	5.592	5.226	4.607	3.739	3.634	3.487	3.266	3.087
285	-	6.590	5.682	5.295	4.712	3.792	3.686	3.538	3.313	3.130
290	-	6.654	5.772	5.365	4.818	3.845	3.738	3.588	3.360	3.174
295	-	6.718	5.862	5.435	4.923	3.900	3.790	3.639	3.408	3.217
300	-	6.783	5.952	5.505	5.029	4.134	3.841	3.690	3.455	3.260
305	-	6.847	6.043	5.579	5.134	4.279	3.979	3.740	3.502	3.304
310	-	6.911	6.133	5.654	5.240	4.424	4.121	3.791	3.549	3.347

Thickness is intumescent only. Results apply to I/H section beams with concrete slabs with 3 sided exposure.

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# CERTIFICATE No CF 5441

## SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 6 FIRETEX FX9500**

I/H Section Beams 90 Minutes										
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
45	3.874	2.357	1.861	1.280	1.061	0.904	0.851	0.780	0.667	0.530
50	4.057	2.567	1.861	1.399	1.157	0.985	0.926	0.848	0.725	0.572
55	4.239	2.776	1.861	1.518	1.254	1.065	1.001	0.916	0.782	0.613
60	4.422	3.155	2.080	1.700	1.415	1.210	1.140	1.046	0.898	0.721
65	4.605	3.533	2.367	1.882	1.577	1.354	1.279	1.175	1.015	0.829
70	4.787	3.866	2.653	2.065	1.739	1.499	1.417	1.305	1.131	0.937
75	4.970	3.989	2.940	2.273	1.901	1.644	1.556	1.434	1.248	1.045
80	5.152	4.113	3.226	2.481	2.063	1.789	1.695	1.564	1.364	1.152
85	5.335	4.236	3.512	2.689	2.220	1.933	1.833	1.693	1.481	1.260
90	5.518	4.360	3.799	2.898	2.376	2.075	1.972	1.823	1.597	1.368
95	5.619	4.483	3.936	3.106	2.533	2.182	2.096	1.952	1.714	1.476
100	5.717	4.606	4.045	3.314	2.689	2.290	2.188	2.076	1.830	1.583
105	5.815	4.730	4.154	3.523	2.846	2.397	2.279	2.149	1.947	1.691
110	5.914	4.853	4.263	3.731	3.003	2.504	2.371	2.223	2.063	1.799
115	6.012	4.976	4.372	3.889	3.159	2.611	2.462	2.296	2.119	1.907
120	6.110	5.100	4.481	3.986	3.316	2.718	2.554	2.370	2.173	2.015
125	6.208	5.223	4.590	4.084	3.473	2.825	2.645	2.443	2.227	2.094
130	6.307	5.346	4.700	4.181	3.629	2.932	2.737	2.516	2.280	2.146
135	6.405	5.470	4.809	4.279	3.786	3.039	2.828	2.590	2.334	2.199
140	6.503	5.572	4.918	4.376	3.890	3.147	2.920	2.663	2.387	2.251
145	6.601	5.659	5.027	4.474	3.964	3.254	3.011	2.737	2.441	2.303
150	6.700	5.745	5.136	4.571	4.037	3.361	3.103	2.810	2.494	2.355
155	6.798	5.832	5.245	4.669	4.111	3.468	3.194	2.883	2.548	2.407
160	6.896	5.918	5.354	4.766	4.184	3.575	3.286	2.957	2.601	2.459
165	-	6.005	5.463	4.864	4.258	3.682	3.377	3.030	2.655	2.511
170	-	6.091	5.548	4.961	4.332	3.789	3.468	3.104	2.709	2.563
175	-	6.178	5.604	5.059	4.405	3.880	3.560	3.177	2.762	2.616
180	-	6.264	5.659	5.157	4.479	3.954	3.651	3.250	2.816	2.668
185	-	6.351	5.714	5.254	4.552	4.028	3.743	3.324	2.869	2.720
190	-	6.437	5.769	5.352	4.626	4.102	3.834	3.397	2.923	2.772
195	-	6.524	5.824	5.449	4.699	4.176	3.916	3.471	2.976	2.824
200	-	6.610	5.879	5.537	4.773	4.250	3.997	3.544	3.030	2.876
205	-	6.697	5.934	5.591	4.846	4.324	4.077	3.617	3.083	2.928
210	-	6.783	5.989	5.646	4.920	4.398	4.158	3.691	3.137	2.981
215	-	6.869	6.044	5.700	4.994	4.472	4.239	3.764	3.191	3.033
220	-	6.956	6.100	5.755	5.067	4.546	4.319	3.838	3.244	3.085
225	-	-	6.155	5.809	5.141	4.620	4.400	3.931	3.298	3.137
230	-	-	6.210	5.864	5.214	4.694	4.480	4.027	3.351	3.189
235	-	-	6.265	5.918	5.288	4.768	4.561	4.123	3.405	3.241
240	-	-	6.320	5.973	5.361	4.842	4.642	4.219	3.458	3.293
245	-	-	6.375	6.027	5.435	4.916	4.722	4.314	3.512	3.346
250	-	-	6.430	6.082	5.508	4.990	4.803	4.410	3.566	3.398
255	-	-	6.485	6.136	5.578	5.065	4.884	4.506	3.619	3.450
260	-	-	6.540	6.191	5.646	5.139	4.964	4.602	3.673	3.502
265	-	-	6.596	6.245	5.714	5.213	5.045	4.697	3.726	3.554
270	-	-	6.651	6.299	5.783	5.287	5.125	4.793	3.780	3.606
275	-	-	6.706	6.354	5.851	5.361	5.206	4.889	3.833	3.658
280	-	-	6.761	6.408	5.919	5.435	5.287	4.985	3.959	3.710
285	-	-	6.816	6.463	5.987	5.509	5.367	5.080	4.103	3.763
290	-	-	6.871	6.517	6.055	5.584	5.448	5.176	4.247	3.815
295	-	-	6.926	6.572	6.124	5.660	5.528	5.272	4.391	3.905
300	-	-	6.981	6.626	6.192	5.736	5.602	5.368	4.535	4.044
305	-	-	-	6.681	6.260	5.812	5.676	5.463	4.678	4.182
310	-	-	-	6.735	6.328	5.888	5.750	5.550	4.822	4.321

Thickness is intumescent only. Results apply to I/H section beams with concrete slabs with 3 sided exposure.

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# CERTIFICATE No CF 5441

## SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 7 FIRETEX FX9500**

I/H Section Beams 105 Minutes										
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
45	4.581	3.582	2.403	1.769	1.428	1.255	1.199	1.122	1.017	0.897
50	4.581	3.844	2.611	1.861	1.562	1.371	1.309	1.225	1.110	0.976
55	4.972	4.107	2.819	1.953	1.695	1.486	1.419	1.328	1.202	1.054
60	5.362	4.369	3.229	2.302	1.897	1.670	1.595	1.495	1.357	1.202
65	6.019	4.631	3.639	2.650	2.111	1.853	1.772	1.662	1.511	1.350
70	6.676	4.893	3.943	2.999	2.392	2.036	1.948	1.829	1.666	1.498
75	-	5.155	4.142	3.347	2.673	2.244	2.128	1.996	1.821	1.646
80	-	5.417	4.340	3.695	2.954	2.458	2.315	2.153	1.975	1.793
85	-	5.605	4.539	3.919	3.235	2.671	2.502	2.302	2.107	1.941
90	-	5.743	4.737	4.049	3.516	2.885	2.688	2.452	2.203	2.079
95	-	5.880	4.936	4.179	3.797	3.098	2.875	2.601	2.299	2.154
100	-	6.017	5.134	4.309	3.942	3.312	3.062	2.751	2.396	2.229
105	-	6.155	5.333	4.439	4.060	3.525	3.248	2.901	2.492	2.305
110	-	6.292	5.527	4.570	4.178	3.739	3.435	3.050	2.588	2.380
115	-	6.429	5.612	4.700	4.296	3.896	3.622	3.200	2.685	2.455
120	-	6.567	5.696	4.830	4.415	3.998	3.809	3.349	2.781	2.531
125	-	6.704	5.781	4.960	4.533	4.100	3.920	3.499	2.877	2.606
130	-	6.841	5.866	5.090	4.651	4.202	4.013	3.648	2.974	2.681
135	-	6.979	5.950	5.220	4.769	4.305	4.107	3.798	3.070	2.756
140	-	-	6.035	5.351	4.887	4.407	4.200	3.902	3.166	2.832
145	-	-	6.119	5.481	5.005	4.509	4.294	3.985	3.263	2.907
150	-	-	6.204	5.564	5.123	4.611	4.387	4.068	3.359	2.982
155	-	-	6.289	5.624	5.241	4.713	4.481	4.151	3.455	3.058
160	-	-	6.373	5.683	5.359	4.815	4.574	4.235	3.551	3.133
165	-	-	6.458	5.743	5.477	4.918	4.668	4.318	3.648	3.208
170	-	-	6.543	5.803	5.555	5.020	4.761	4.401	3.744	3.284
175	-	-	6.627	5.862	5.607	5.122	4.855	4.484	3.840	3.359
180	-	-	6.712	5.922	5.659	5.224	4.948	4.568	3.921	3.434
185	-	-	6.797	5.981	5.711	5.326	5.042	4.651	4.000	3.509
190	-	-	6.881	6.041	5.763	5.429	5.135	4.734	4.080	3.585
195	-	-	6.966	6.101	5.814	5.528	5.229	4.817	4.159	3.660
200	-	-	-	6.160	5.866	5.583	5.322	4.901	4.239	3.735
205	-	-	-	6.220	5.918	5.638	5.416	4.984	4.319	3.811
210	-	-	-	6.280	5.970	5.692	5.509	5.067	4.398	3.888
215	-	-	-	6.339	6.022	5.747	5.573	5.150	4.478	3.955
220	-	-	-	6.399	6.074	5.802	5.631	5.234	4.557	4.022
225	-	-	-	6.459	6.125	5.857	5.690	5.317	4.637	4.189
230	-	-	-	6.518	6.177	5.912	5.748	5.400	4.716	4.287
235	-	-	-	6.578	6.229	5.967	5.806	5.483	4.796	4.384
240	-	-	-	6.638	6.281	6.022	5.864	5.557	4.876	4.481
245	-	-	-	6.697	6.333	6.077	5.923	5.622	4.955	4.578
250	-	-	-	6.757	6.385	6.132	5.981	5.686	5.035	4.675
255	-	-	-	6.817	6.436	6.187	6.039	5.751	5.114	4.772
260	-	-	-	6.876	6.488	6.242	6.098	5.815	5.194	4.869
265	-	-	-	6.936	6.540	6.297	6.156	5.880	5.273	4.966
270	-	-	-	-	6.592	6.352	6.214	5.944	5.353	5.063
275	-	-	-	-	6.644	6.407	6.273	6.009	5.433	5.160
280	-	-	-	-	6.696	6.462	6.331	6.073	5.512	5.257
285	-	-	-	-	6.747	6.517	6.389	6.138	5.591	5.355
290	-	-	-	-	6.799	6.572	6.447	6.202	5.670	5.452
295	-	-	-	-	6.851	6.627	6.506	6.267	5.748	5.543
300	-	-	-	-	6.903	6.681	6.564	6.331	5.827	5.617
305	-	-	-	-	6.955	6.736	6.622	6.396	5.906	5.690
310	-	-	-	-	-	6.791	6.681	6.460	5.984	5.764

Thickness is intumescent only. Results apply to I/H section beams with concrete slabs with 3 sided exposure.

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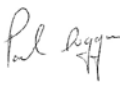


**CERTIFICATE No CF 5441**  
**SHERWIN-WILLIAMS PROTECTIVE &**  
**MARINE COATINGS**

**Table 8 FIRETEX FX9500**

I/H Section Beams 120 Minutes										
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
45	-	4.972	3.400	2.549	1.965	1.861	1.545	1.465	1.367	1.264
50	-	4.972	3.734	2.767	2.116	1.861	1.690	1.602	1.494	1.380
55	-	4.972	4.068	2.985	2.267	1.861	1.835	1.739	1.621	1.495
60	-	5.806	4.474	3.432	2.688	2.170	2.050	1.944	1.814	1.683
65	-	6.751	4.879	3.870	3.109	2.531	2.368	2.179	2.007	1.871
70	-	-	5.285	4.199	3.530	2.891	2.696	2.464	2.201	2.059
75	-	-	5.622	4.529	3.898	3.252	3.024	2.748	2.394	2.188
80	-	-	5.861	4.858	4.110	3.613	3.352	3.033	2.587	2.314
85	-	-	6.100	5.188	4.322	3.890	3.680	3.317	2.781	2.439
90	-	-	6.338	5.517	4.534	4.018	3.905	3.602	2.974	2.565
95	-	-	6.577	5.616	4.746	4.146	4.026	3.860	3.167	2.691
100	-	-	6.816	5.709	4.958	4.274	4.147	3.971	3.361	2.817
105	-	-	-	5.803	5.170	4.403	4.269	4.082	3.554	2.943
110	-	-	-	5.897	5.383	4.531	4.390	4.193	3.747	3.069
115	-	-	-	5.990	5.549	4.659	4.511	4.304	3.893	3.195
120	-	-	-	6.084	5.622	4.787	4.633	4.415	3.991	3.321
125	-	-	-	6.177	5.696	4.915	4.754	4.525	4.090	3.447
130	-	-	-	6.271	5.770	5.043	4.875	4.636	4.188	3.573
135	-	-	-	6.365	5.844	5.171	4.997	4.747	4.286	3.698
140	-	-	-	6.458	5.917	5.299	5.118	4.858	4.384	3.824
145	-	-	-	6.552	5.991	5.428	5.239	4.969	4.482	3.926
150	-	-	-	6.646	6.065	5.538	5.361	5.080	4.581	4.024
155	-	-	-	6.739	6.139	5.597	5.482	5.190	4.679	4.121
160	-	-	-	6.833	6.213	5.655	5.559	5.301	4.777	4.219
165	-	-	-	6.927	6.286	5.714	5.612	5.412	4.875	4.316
170	-	-	-	-	6.360	5.772	5.666	5.523	4.973	4.414
175	-	-	-	-	6.434	5.830	5.719	5.577	5.072	4.511
180	-	-	-	-	6.508	5.889	5.773	5.631	5.170	4.609
185	-	-	-	-	6.581	5.947	5.826	5.685	5.268	4.706
190	-	-	-	-	6.655	6.006	5.880	5.739	5.366	4.804
195	-	-	-	-	6.729	6.064	5.933	5.792	5.465	4.901
200	-	-	-	-	6.803	6.122	5.987	5.846	5.547	4.999
205	-	-	-	-	6.876	6.181	6.040	5.900	5.604	5.096
210	-	-	-	-	6.950	6.239	6.094	5.954	5.662	5.194
215	-	-	-	-	-	6.298	6.147	6.007	5.720	5.291
220	-	-	-	-	-	6.356	6.201	6.061	5.777	5.388
225	-	-	-	-	-	6.414	6.254	6.115	5.835	5.486
230	-	-	-	-	-	6.473	6.308	6.169	5.892	5.564
235	-	-	-	-	-	6.531	6.361	6.222	5.950	5.630
240	-	-	-	-	-	6.590	6.415	6.276	6.008	5.696
245	-	-	-	-	-	6.648	6.468	6.330	6.065	5.762
250	-	-	-	-	-	6.706	6.522	6.384	6.123	5.828
255	-	-	-	-	-	6.765	6.575	6.437	6.181	5.894
260	-	-	-	-	-	6.823	6.629	6.491	6.238	5.960
265	-	-	-	-	-	6.882	6.682	6.545	6.296	6.026
270	-	-	-	-	-	6.940	6.736	6.599	6.353	6.092
275	-	-	-	-	-	-	6.789	6.653	6.411	6.158
280	-	-	-	-	-	-	6.843	6.706	6.469	6.224
285	-	-	-	-	-	-	6.896	6.760	6.526	6.291
290	-	-	-	-	-	-	6.950	6.814	6.584	6.357
295	-	-	-	-	-	-	-	6.868	6.641	6.423
300	-	-	-	-	-	-	-	6.921	6.699	6.489
305	-	-	-	-	-	-	-	6.975	6.757	6.555
310	-	-	-	-	-	-	-	-	6.814	6.621

Thickness is intumescent only. Results apply to I/H section beams with concrete slabs with 3 sided exposure.

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## CERTIFICATE No CF 5441 SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 9 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	I/H Section Columns 15 minutes														
	Thickness (mm) Required for a Design Temperature of														
	350°C	400°C	450°C	500°C	510°C	530°C	539°C	545°C	550°C	563°C	580°C	600°C	650°C	700°C	750°C
50	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
55	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
60	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
65	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
70	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
75	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
80	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
85	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
90	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
95	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
100	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
105	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
110	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
115	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
120	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
125	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
130	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
135	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
140	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
145	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
150	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
155	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
160	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
165	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
170	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
175	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
180	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
185	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
190	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
195	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
200	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
205	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
210	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
215	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
220	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
225	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
230	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
235	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
240	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
245	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
250	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
255	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
260	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
265	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
270	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
275	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
280	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
285	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
290	0.364	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
295	0.389	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
300	0.415	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
305	0.440	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
310	0.466	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
315	0.491	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
320	0.517	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
325	0.543	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
330	0.568	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
335	0.594	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
340	0.619	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
345	0.645	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
350	0.670	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
355	0.696	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
360	0.721	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
365	0.747	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360

Thickness is intumescent only. Results also apply to beams with 4-side fire exposure subject to maximum DFT of 6.991 mm.





# CERTIFICATE No CF 5441

## SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 10 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	I/H Section Columns 20 minutes														
	Thickness (mm) Required for a Design Temperature of														
	350°C	400°C	450°C	500°C	510°C	530°C	539°C	545°C	550°C	563°C	580°C	600°C	650°C	700°C	750°C
50	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
55	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
60	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
65	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
70	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
75	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
80	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
85	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
90	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
95	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
100	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
105	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
110	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
115	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
120	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
125	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
130	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
135	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
140	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
145	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
150	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
155	0.371	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
160	0.399	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
165	0.427	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
170	0.455	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
175	0.483	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
180	0.511	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
185	0.539	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
190	0.567	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
195	0.595	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
200	0.623	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
205	0.651	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
210	0.679	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
215	0.707	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
220	0.735	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
225	0.763	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
230	0.791	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
235	0.819	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
240	0.847	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
245	0.875	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
250	0.903	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
255	0.931	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
260	0.959	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
265	0.987	0.380	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
270	1.015	0.408	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
275	1.043	0.436	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
280	1.071	0.464	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
285	1.099	0.493	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
290	1.127	0.521	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
295	1.155	0.549	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
300	1.183	0.577	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
305	1.211	0.605	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
310	1.239	0.633	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
315	1.267	0.661	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
320	1.295	0.689	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
325	1.323	0.717	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
330	1.351	0.745	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
335	1.379	0.773	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
340	1.407	0.801	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
345	1.435	0.829	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
350	1.463	0.857	0.363	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
355	1.491	0.885	0.390	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
360	1.519	0.913	0.417	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
365	1.547	0.941	0.444	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360

Thickness is intumescent only. Results also apply to beams with 4-side fire exposure subject to maximum DFT of 6.991 mm.

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E/038

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## CERTIFICATE No CF 5441 SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 11 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	I/H Section Columns 30 minutes														
	Thickness (mm) Required for a Design Temperature of														
	350°C	400°C	450°C	500°C	510°C	530°C	539°C	545°C	550°C	563°C	580°C	600°C	650°C	700°C	750°C
50	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
55	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
60	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
65	0.398	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
70	0.439	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
75	0.480	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
80	0.521	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
85	0.562	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
90	0.603	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
95	0.644	0.363	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
100	0.685	0.395	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
105	0.726	0.426	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
110	0.767	0.458	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
115	0.808	0.489	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
120	0.849	0.521	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
125	0.890	0.552	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
130	0.931	0.584	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
135	0.972	0.615	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
140	1.013	0.647	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
145	1.054	0.678	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
150	1.095	0.710	0.378	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
155	1.136	0.741	0.409	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
160	1.177	0.773	0.440	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
165	1.218	0.804	0.471	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
170	1.259	0.836	0.501	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
175	1.300	0.867	0.532	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
180	1.341	0.899	0.563	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
185	1.382	0.930	0.594	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
190	1.423	0.962	0.624	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
195	1.464	0.993	0.655	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
200	1.505	1.025	0.686	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
205	1.546	1.056	0.717	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
210	1.587	1.088	0.748	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
215	1.628	1.119	0.778	0.383	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
220	1.669	1.151	0.809	0.414	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
225	1.710	1.182	0.840	0.446	0.363	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
230	1.751	1.214	0.871	0.477	0.395	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
235	1.792	1.245	0.902	0.508	0.426	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
240	1.833	1.277	0.932	0.539	0.457	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
245	1.874	1.308	0.963	0.571	0.489	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
250	1.915	1.340	0.994	0.602	0.520	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
255	1.956	1.371	1.025	0.633	0.551	0.369	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
260	1.997	1.403	1.056	0.664	0.583	0.401	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
265	2.038	1.434	1.086	0.696	0.614	0.432	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
270	2.079	1.466	1.117	0.727	0.645	0.464	0.371	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
275	2.119	1.497	1.148	0.758	0.677	0.496	0.403	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
280	2.155	1.529	1.179	0.790	0.708	0.527	0.435	0.370	0.360	0.360	0.360	0.360	0.360	0.360	0.360
285	2.191	1.560	1.210	0.821	0.739	0.559	0.467	0.402	0.360	0.360	0.360	0.360	0.360	0.360	0.360
290	2.226	1.592	1.240	0.852	0.771	0.591	0.499	0.434	0.378	0.360	0.360	0.360	0.360	0.360	0.360
295	2.262	1.623	1.271	0.883	0.802	0.622	0.531	0.466	0.410	0.360	0.360	0.360	0.360	0.360	0.360
300	2.298	1.655	1.302	0.915	0.833	0.654	0.563	0.498	0.442	0.360	0.360	0.360	0.360	0.360	0.360
305	2.334	1.686	1.333	0.946	0.865	0.686	0.594	0.531	0.475	0.360	0.360	0.360	0.360	0.360	0.360
310	2.369	1.718	1.364	0.977	0.896	0.717	0.626	0.563	0.507	0.360	0.360	0.360	0.360	0.360	0.360
315	2.405	1.749	1.394	1.008	0.927	0.749	0.658	0.595	0.539	0.380	0.360	0.360	0.360	0.360	0.360
320	2.441	1.781	1.425	1.040	0.959	0.781	0.690	0.627	0.572	0.413	0.360	0.360	0.360	0.360	0.360
325	2.477	1.812	1.456	1.071	0.990	0.812	0.722	0.659	0.604	0.446	0.360	0.360	0.360	0.360	0.360
330	2.512	1.844	1.487	1.102	1.021	0.844	0.754	0.691	0.636	0.479	0.360	0.360	0.360	0.360	0.360
335	2.548	1.875	1.518	1.134	1.053	0.876	0.786	0.723	0.669	0.512	0.390	0.360	0.360	0.360	0.360
340	2.584	1.907	1.548	1.165	1.084	0.907	0.818	0.756	0.701	0.545	0.422	0.360	0.360	0.360	0.360
345	2.620	1.939	1.579	1.196	1.115	0.939	0.850	0.788	0.733	0.578	0.454	0.360	0.360	0.360	0.360
350	2.655	1.970	1.610	1.227	1.147	0.971	0.882	0.820	0.766	0.611	0.486	0.360	0.360	0.360	0.360
355	2.691	2.002	1.641	1.259	1.178	1.002	0.914	0.852	0.798	0.644	0.518	0.387	0.360	0.360	0.360
360	2.727	2.033	1.672	1.290	1.209	1.034	0.946	0.884	0.830	0.677	0.550	0.417	0.360	0.360	0.360
365	2.763	2.065	1.702	1.321	1.241	1.066	0.978	0.916	0.863	0.710	0.582	0.448	0.360	0.360	0.360

Thickness is intumescent only. Results also apply to beams with 4-side fire exposure subject to maximum DFT of 6.991 mm.

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## CERTIFICATE No CF 5441

# SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 12 FIRETEX FX9500**

I/H Section Columns 45 minutes															
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of														
	350°C	400°C	450°C	500°C	510°C	530°C	539°C	545°C	550°C	563°C	580°C	600°C	650°C	700°C	750°C
50	0.851	0.417	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
55	0.927	0.490	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
60	1.024	0.564	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
65	1.120	0.637	0.395	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
70	1.217	0.710	0.451	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
75	1.314	0.784	0.508	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
80	1.411	0.857	0.565	0.369	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
85	1.508	0.930	0.622	0.408	0.376	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
90	1.605	1.004	0.679	0.447	0.412	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
95	1.702	1.077	0.736	0.486	0.448	0.374	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
100	1.799	1.150	0.792	0.525	0.485	0.410	0.374	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
105	1.896	1.224	0.849	0.564	0.521	0.446	0.410	0.384	0.362	0.360	0.360	0.360	0.360	0.360	0.360
110	1.993	1.297	0.906	0.603	0.558	0.482	0.445	0.420	0.397	0.360	0.360	0.360	0.360	0.360	0.360
115	2.090	1.370	0.963	0.642	0.594	0.517	0.481	0.455	0.433	0.371	0.360	0.360	0.360	0.360	0.360
120	2.144	1.444	1.020	0.680	0.631	0.553	0.516	0.491	0.468	0.406	0.360	0.360	0.360	0.360	0.360
125	2.183	1.517	1.076	0.719	0.667	0.589	0.552	0.526	0.503	0.441	0.360	0.360	0.360	0.360	0.360
130	2.222	1.590	1.133	0.758	0.704	0.625	0.587	0.561	0.538	0.476	0.387	0.360	0.360	0.360	0.360
135	2.261	1.664	1.190	0.797	0.740	0.661	0.623	0.597	0.574	0.511	0.422	0.360	0.360	0.360	0.360
140	2.299	1.737	1.247	0.836	0.777	0.696	0.659	0.632	0.609	0.547	0.457	0.360	0.360	0.360	0.360
145	2.338	1.810	1.304	0.875	0.813	0.732	0.694	0.668	0.644	0.582	0.492	0.365	0.360	0.360	0.360
150	2.377	1.884	1.361	0.914	0.849	0.768	0.730	0.703	0.680	0.617	0.527	0.400	0.360	0.360	0.360
155	2.416	1.957	1.417	0.953	0.886	0.804	0.765	0.738	0.715	0.652	0.562	0.435	0.360	0.360	0.360
160	2.454	2.030	1.474	0.992	0.922	0.840	0.801	0.774	0.750	0.687	0.597	0.470	0.360	0.360	0.360
165	2.493	2.104	1.531	1.031	0.959	0.875	0.836	0.809	0.785	0.722	0.632	0.506	0.360	0.360	0.360
170	2.532	2.148	1.588	1.069	0.995	0.911	0.872	0.844	0.821	0.757	0.667	0.541	0.360	0.360	0.360
175	2.571	2.187	1.645	1.108	1.032	0.947	0.907	0.880	0.856	0.792	0.702	0.576	0.360	0.360	0.360
180	2.610	2.226	1.702	1.147	1.068	0.983	0.943	0.915	0.891	0.827	0.737	0.611	0.360	0.360	0.360
185	2.648	2.265	1.758	1.186	1.105	1.018	0.978	0.951	0.927	0.862	0.772	0.646	0.360	0.360	0.360
190	2.687	2.303	1.815	1.225	1.141	1.054	1.014	0.986	0.962	0.897	0.807	0.682	0.360	0.360	0.360
195	2.726	2.342	1.872	1.264	1.177	1.090	1.049	1.021	0.997	0.932	0.842	0.717	0.370	0.360	0.360
200	2.765	2.381	1.929	1.303	1.214	1.126	1.085	1.057	1.032	0.968	0.877	0.752	0.406	0.360	0.360
205	2.804	2.420	1.986	1.342	1.250	1.162	1.120	1.092	1.068	1.003	0.912	0.787	0.441	0.360	0.360
210	2.842	2.459	2.042	1.381	1.287	1.197	1.156	1.127	1.103	1.038	0.947	0.822	0.476	0.360	0.360
215	2.881	2.497	2.099	1.419	1.323	1.233	1.191	1.163	1.138	1.073	0.982	0.858	0.511	0.360	0.360
220	2.920	2.536	2.144	1.458	1.360	1.269	1.227	1.198	1.174	1.108	1.017	0.893	0.547	0.360	0.360
225	2.959	2.575	2.184	1.497	1.396	1.305	1.263	1.234	1.209	1.143	1.052	0.928	0.582	0.360	0.360
230	2.997	2.614	2.224	1.536	1.433	1.341	1.298	1.269	1.244	1.178	1.087	0.963	0.617	0.360	0.360
235	3.036	2.653	2.264	1.575	1.469	1.376	1.334	1.304	1.279	1.213	1.122	0.998	0.652	0.360	0.360
240	3.075	2.691	2.304	1.614	1.506	1.412	1.369	1.340	1.315	1.248	1.157	1.034	0.688	0.360	0.360
245	3.114	2.730	2.344	1.653	1.542	1.448	1.405	1.375	1.350	1.283	1.192	1.069	0.723	0.360	0.360
250	3.153	2.769	2.384	1.692	1.578	1.484	1.440	1.411	1.385	1.318	1.227	1.104	0.758	0.366	0.360
255	3.191	2.808	2.423	1.731	1.615	1.519	1.476	1.446	1.421	1.353	1.262	1.139	0.794	0.400	0.360
260	3.230	2.847	2.463	1.770	1.651	1.555	1.511	1.481	1.456	1.389	1.297	1.174	0.829	0.434	0.360
265	3.269	2.885	2.503	1.808	1.688	1.591	1.547	1.517	1.491	1.424	1.332	1.210	0.864	0.468	0.360
270	3.308	2.924	2.543	1.847	1.724	1.627	1.582	1.552	1.526	1.459	1.366	1.245	0.899	0.502	0.360
275	3.346	2.963	2.583	1.886	1.761	1.663	1.618	1.587	1.562	1.494	1.401	1.280	0.935	0.536	0.360
280	3.385	3.002	2.623	1.925	1.797	1.698	1.653	1.623	1.597	1.529	1.436	1.315	0.970	0.570	0.360
285	3.424	3.041	2.663	1.964	1.834	1.734	1.689	1.658	1.632	1.564	1.471	1.350	1.005	0.604	0.360
290	3.463	3.079	2.703	2.003	1.870	1.770	1.724	1.694	1.667	1.599	1.506	1.386	1.040	0.638	0.360
295	3.502	3.118	2.743	2.042	1.906	1.806	1.760	1.729	1.703	1.634	1.541	1.421	1.076	0.672	0.360
300	3.540	3.157	2.783	2.081	1.943	1.842	1.795	1.764	1.738	1.669	1.576	1.456	1.111	0.706	0.360
305	3.579	3.196	2.823	2.121	1.979	1.877	1.831	1.800	1.773	1.704	1.611	1.491	1.146	0.740	0.360
310	3.618	3.235	2.862	2.170	2.016	1.913	1.867	1.835	1.809	1.739	1.646	1.526	1.181	0.774	0.360
315	3.657	3.273	2.902	2.219	2.052	1.949	1.902	1.871	1.844	1.774	1.681	1.561	1.217	0.808	0.360
320	3.695	3.312	2.942	2.268	2.089	1.985	1.938	1.906	1.879	1.810	1.716	1.597	1.252	0.842	0.360
325	3.734	3.351	2.982	2.317	2.129	2.020	1.973	1.941	1.914	1.845	1.751	1.632	1.287	0.876	0.360
330	3.773	3.390	3.022	2.366	2.181	2.056	2.009	1.977	1.950	1.880	1.786	1.667	1.322	0.910	0.360
335	3.812	3.429	3.062	2.415	2.232	2.092	2.044	2.012	1.985	1.915	1.821	1.702	1.358	0.944	0.360
340	3.851	3.467	3.102	2.464	2.284	2.133	2.080	2.047	2.020	1.950	1.856	1.737	1.393	0.978	0.360
345	3.890	3.506	3.142	2.513	2.336	2.182	2.115	2.083	2.056	1.985	1.891	1.773	1.428	1.012	0.360
350	4.134	3.545	3.182	2.562	2.387	2.232	2.164	2.119	2.091	2.020	1.926	1.808	1.463	1.046	0.390
355	4.319	3.584	3.222	2.611	2.439	2.282	2.213	2.167	2.130	2.055	1.961	1.843	1.499	1.080	0.423
360	4.504	3.623	3.262	2.660	2.491	2.331	2.262	2.216	2.178	2.090	1.996	1.878	1.534	1.114	0.456
365	4.689	3.661	3.301	2.709	2.542	2.381	2.310	2.264	2.225	2.128	2.031	1.913	1.569	1.148	0.490

Thickness is intumescent only. Results also apply to beams with 4-side fire exposure subject to maximum DFT of 6.991 mm.

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**CERTIFICATE No CF 5441  
SHERWIN-WILLIAMS PROTECTIVE &  
MARINE COATINGS**

**Table 13 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	I/H Section Columns 60 minutes														
	Thickness (mm) Required for a Design Temperature of														
	350°C	400°C	450°C	500°C	510°C	530°C	539°C	545°C	550°C	563°C	580°C	600°C	650°C	700°C	750°C
50	1.482	1.019	0.682	0.388	0.388	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
55	1.614	1.108	0.738	0.462	0.428	0.362	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
60	1.774	1.227	0.835	0.545	0.509	0.439	0.411	0.391	0.375	0.360	0.360	0.360	0.360	0.360	0.360
65	1.933	1.347	0.933	0.628	0.590	0.516	0.485	0.465	0.447	0.407	0.360	0.360	0.360	0.360	0.360
70	2.093	1.466	1.030	0.711	0.671	0.592	0.560	0.538	0.520	0.475	0.423	0.367	0.360	0.360	0.360
75	2.209	1.585	1.127	0.795	0.752	0.669	0.635	0.611	0.592	0.544	0.485	0.423	0.360	0.360	0.360
80	2.318	1.704	1.224	0.878	0.833	0.746	0.709	0.685	0.664	0.612	0.548	0.479	0.360	0.360	0.360
85	2.427	1.824	1.322	0.961	0.914	0.822	0.784	0.758	0.736	0.681	0.610	0.535	0.385	0.360	0.360
90	2.535	1.943	1.419	1.044	0.995	0.899	0.859	0.831	0.809	0.750	0.673	0.591	0.425	0.360	0.360
95	2.644	2.062	1.516	1.127	1.076	0.976	0.933	0.905	0.881	0.818	0.736	0.647	0.466	0.360	0.360
100	2.753	2.154	1.613	1.211	1.157	1.053	1.008	0.978	0.953	0.887	0.798	0.703	0.507	0.360	0.360
105	2.862	2.224	1.710	1.294	1.238	1.129	1.083	1.051	1.026	0.955	0.861	0.760	0.547	0.362	0.360
110	2.971	2.294	1.808	1.377	1.319	1.206	1.157	1.125	1.098	1.024	0.923	0.816	0.588	0.398	0.360
115	3.079	2.364	1.905	1.460	1.400	1.283	1.232	1.198	1.170	1.092	0.986	0.872	0.629	0.433	0.360
120	3.188	2.434	2.002	1.543	1.481	1.359	1.307	1.271	1.243	1.161	1.048	0.928	0.669	0.469	0.360
125	3.297	2.504	2.099	1.626	1.562	1.436	1.381	1.345	1.315	1.230	1.111	0.984	0.710	0.505	0.360
130	3.406	2.575	2.154	1.710	1.643	1.513	1.456	1.418	1.387	1.298	1.174	1.040	0.751	0.541	0.360
135	3.515	2.645	2.200	1.793	1.724	1.590	1.531	1.492	1.459	1.367	1.236	1.096	0.792	0.576	0.360
140	3.623	2.715	2.246	1.876	1.805	1.666	1.605	1.565	1.532	1.435	1.299	1.152	0.832	0.612	0.360
145	3.732	2.785	2.292	1.959	1.886	1.743	1.680	1.638	1.604	1.504	1.361	1.208	0.873	0.648	0.360
150	3.841	2.855	2.338	2.042	1.967	1.820	1.755	1.712	1.676	1.573	1.424	1.264	0.914	0.684	0.360
155	3.937	2.925	2.384	2.121	2.048	1.896	1.829	1.785	1.749	1.641	1.487	1.320	0.954	0.719	0.360
160	4.028	2.995	2.430	2.164	2.123	1.973	1.904	1.858	1.821	1.710	1.549	1.376	0.995	0.755	0.360
165	4.119	3.065	2.476	2.208	2.166	2.050	1.979	1.932	1.893	1.778	1.612	1.432	1.036	0.791	0.360
170	4.210	3.135	2.522	2.251	2.209	2.122	2.053	2.005	1.965	1.847	1.674	1.489	1.076	0.827	0.360
175	4.301	3.205	2.568	2.295	2.252	2.164	2.123	2.078	2.038	1.916	1.737	1.545	1.117	0.862	0.360
180	4.393	3.275	2.614	2.338	2.295	2.206	2.164	2.136	2.100	1.984	1.800	1.601	1.158	0.898	0.389
185	4.484	3.345	2.660	2.382	2.338	2.248	2.206	2.178	2.154	2.053	1.862	1.657	1.198	0.934	0.428
190	4.575	3.415	2.706	2.425	2.381	2.290	2.248	2.219	2.195	2.119	1.925	1.713	1.239	0.970	0.467
195	4.666	3.485	2.752	2.469	2.424	2.332	2.290	2.261	2.236	2.160	1.987	1.769	1.280	1.006	0.506
200	4.757	3.555	2.798	2.512	2.467	2.374	2.331	2.302	2.278	2.201	2.050	1.825	1.320	1.041	0.545
205	4.848	3.625	2.844	2.556	2.510	2.416	2.373	2.344	2.319	2.243	2.112	1.881	1.361	1.077	0.584
210	4.939	3.695	2.890	2.599	2.553	2.459	2.415	2.385	2.360	2.284	2.155	1.937	1.402	1.113	0.624
215	5.030	3.765	2.936	2.643	2.596	2.501	2.457	2.427	2.402	2.325	2.197	1.993	1.442	1.149	0.663
220	5.121	3.835	2.982	2.686	2.639	2.543	2.498	2.468	2.443	2.366	2.238	2.049	1.483	1.184	0.702
225	5.212	3.910	3.028	2.730	2.682	2.585	2.540	2.510	2.484	2.407	2.280	2.105	1.524	1.220	0.741
230	5.303	3.990	3.074	2.773	2.725	2.627	2.582	2.551	2.526	2.448	2.321	2.150	1.565	1.256	0.780
235	5.394	4.070	3.120	2.817	2.768	2.669	2.624	2.593	2.567	2.490	2.363	2.193	1.605	1.292	0.819
240	5.485	4.151	3.166	2.860	2.811	2.711	2.665	2.634	2.608	2.531	2.404	2.235	1.646	1.327	0.858
245	5.576	4.231	3.212	2.904	2.854	2.753	2.707	2.676	2.650	2.572	2.446	2.277	1.687	1.363	0.898
250	5.662	4.311	3.258	2.947	2.897	2.796	2.749	2.717	2.691	2.613	2.487	2.320	1.727	1.399	0.937
255	5.745	4.391	3.303	2.991	2.940	2.838	2.790	2.759	2.732	2.654	2.529	2.362	1.768	1.435	0.976
260	5.829	4.471	3.349	3.034	2.983	2.880	2.832	2.800	2.774	2.695	2.571	2.404	1.809	1.470	1.015
265	5.912	4.552	3.395	3.078	3.026	2.922	2.874	2.842	2.815	2.737	2.612	2.447	1.849	1.506	1.054
270	5.996	4.632	3.441	3.121	3.069	2.964	2.916	2.883	2.856	2.778	2.654	2.489	1.890	1.542	1.093
275	6.079	4.712	3.487	3.165	3.112	3.006	2.957	2.925	2.898	2.819	2.695	2.532	1.931	1.578	1.132
280	6.163	4.792	3.533	3.208	3.155	3.048	2.999	2.966	2.939	2.860	2.737	2.574	1.971	1.613	1.172
285	6.246	4.873	3.579	3.252	3.198	3.090	3.041	3.008	2.980	2.901	2.778	2.616	2.012	1.649	1.211
290	6.329	4.953	3.625	3.295	3.241	3.132	3.083	3.049	3.022	2.942	2.820	2.659	2.053	1.685	1.250
295	6.413	5.033	3.671	3.338	3.284	3.175	3.124	3.091	3.063	2.984	2.861	2.701	2.093	1.721	1.289
300	6.496	5.113	3.717	3.382	3.327	3.217	3.166	3.132	3.104	3.025	2.903	2.743	2.138	1.757	1.328
305	6.580	5.194	3.763	3.425	3.370	3.259	3.208	3.174	3.146	3.066	2.945	2.786	2.186	1.792	1.367
310	6.663	5.274	3.809	3.469	3.413	3.301	3.250	3.215	3.187	3.107	2.986	2.828	2.235	1.828	1.406
315	6.747	5.354	3.855	3.512	3.456	3.343	3.291	3.257	3.228	3.148	3.028	2.871	2.283	1.864	1.446
320	6.830	5.434	3.902	3.556	3.499	3.385	3.333	3.298	3.270	3.189	3.069	2.913	2.332	1.900	1.485
325	6.914	5.514	4.009	3.599	3.542	3.427	3.375	3.340	3.311	3.231	3.111	2.955	2.380	1.935	1.524
330	6.997	5.595	4.256	3.643	3.585	3.469	3.417	3.381	3.352	3.272	3.152	2.998	2.429	1.971	1.563
335	7.081	5.694	4.402	3.686	3.628	3.512	3.458	3.423	3.394	3.313	3.194	3.040	2.477	2.007	1.602
340	7.164	5.796	4.549	3.730	3.671	3.554	3.500	3.464	3.435	3.354	3.235	3.082	2.526	2.043	1.641
345	7.247	5.898	4.696	3.773	3.715	3.596	3.542	3.506	3.476	3.395	3.277	3.125	2.574	2.078	1.681
350	7.331	6.001	4.843	3.817	3.758	3.638	3.583	3.547	3.518	3.436	3.318	3.167	2.623	2.114	1.720
355	7.414	6.103	4.990	3.860	3.801	3.680	3.625	3.589	3.559	3.478	3.360	3.210	2.671	2.162	1.759
360	7.498	6.205	5.136	3.977	3.844	3.722	3.667	3.630	3.600	3.519	3.402	3.252	2.720	2.210	1.798
365	7.581	6.308	5.283	4.125	3.918	3.764	3.709	3.672	3.642	3.560	3.443	3.294	2.768	2.258	1.837

Thickness is intumescent only. Results also apply to beams with 4-side fire exposure subject to maximum DFT of 6.991 mm. Thicknesses in excess of 8.578 mm must be meshed at mid depth with FIRETEX J120 Scrim Mesh.



**CERTIFICATE No CF 5441  
SHERWIN-WILLIAMS PROTECTIVE &  
MARINE COATINGS**

**Table 14 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	I/H Section Columns 75 minutes														
	Thickness (mm) Required for a Design Temperature of														
	350°C	400°C	450°C	500°C	510°C	530°C	539°C	545°C	550°C	563°C	580°C	600°C	650°C	700°C	750°C
50	2.057	1.556	1.158	0.873	0.825	0.735	0.703	0.679	0.660	0.616	0.477	0.428	0.360	0.360	0.360
55	2.425	1.695	1.258	0.945	0.893	0.794	0.759	0.733	0.712	0.664	0.576	0.522	0.403	0.360	0.360
60	2.793	1.867	1.402	1.069	1.013	0.907	0.869	0.841	0.819	0.766	0.676	0.615	0.485	0.360	0.360
65	3.161	2.040	1.547	1.192	1.133	1.020	0.979	0.949	0.926	0.869	0.775	0.708	0.567	0.423	0.360
70	3.528	2.218	1.691	1.316	1.253	1.134	1.090	1.058	1.033	0.972	0.875	0.801	0.648	0.492	0.360
75	3.880	2.400	1.836	1.439	1.373	1.247	1.200	1.166	1.140	1.075	0.974	0.894	0.730	0.560	0.360
80	3.987	2.582	1.980	1.562	1.493	1.360	1.310	1.275	1.247	1.178	1.074	0.988	0.812	0.629	0.408
85	4.093	2.764	2.123	1.686	1.613	1.473	1.420	1.383	1.354	1.280	1.173	1.081	0.894	0.698	0.461
90	4.199	2.946	2.240	1.809	1.733	1.586	1.531	1.491	1.461	1.383	1.273	1.174	0.976	0.767	0.514
95	4.306	3.128	2.356	1.933	1.852	1.699	1.641	1.600	1.568	1.486	1.373	1.267	1.057	0.835	0.567
100	4.412	3.310	2.473	2.056	1.972	1.812	1.751	1.708	1.674	1.589	1.472	1.361	1.139	0.904	0.620
105	4.519	3.492	2.589	2.180	2.092	1.925	1.861	1.817	1.781	1.692	1.572	1.454	1.221	0.973	0.673
110	4.625	3.674	2.706	2.245	2.180	2.038	1.972	1.925	1.888	1.794	1.671	1.547	1.303	1.042	0.726
115	4.732	3.856	2.823	2.331	2.260	2.137	2.082	2.033	1.995	1.897	1.771	1.640	1.385	1.110	0.779
120	4.838	3.971	2.939	2.416	2.339	2.206	2.160	2.130	2.102	2.000	1.870	1.734	1.466	1.179	0.832
125	4.945	4.079	3.056	2.502	2.419	2.275	2.224	2.191	2.167	2.103	1.970	1.827	1.548	1.248	0.885
130	5.051	4.187	3.173	2.587	2.499	2.344	2.288	2.252	2.225	2.161	2.069	1.920	1.630	1.316	0.938
135	5.158	4.295	3.289	2.673	2.578	2.413	2.352	2.313	2.283	2.213	2.140	2.013	1.712	1.385	0.991
140	5.264	4.404	3.406	2.758	2.658	2.481	2.416	2.374	2.342	2.265	2.185	2.107	1.793	1.454	1.044
145	5.371	4.512	3.522	2.844	2.738	2.550	2.479	2.434	2.400	2.317	2.230	2.156	1.875	1.523	1.097
150	5.477	4.620	3.639	2.929	2.818	2.619	2.543	2.495	2.458	2.369	2.275	2.200	1.957	1.591	1.150
155	5.584	4.728	3.756	3.015	2.897	2.688	2.607	2.556	2.516	2.421	2.320	2.244	2.039	1.660	1.203
160	5.681	4.836	3.872	3.100	2.977	2.757	2.671	2.617	2.575	2.473	2.365	2.288	2.118	1.729	1.256
165	5.776	4.944	3.964	3.185	3.057	2.825	2.735	2.678	2.633	2.525	2.410	2.332	2.160	1.798	1.309
170	5.871	5.052	4.056	3.271	3.137	2.894	2.799	2.739	2.691	2.578	2.455	2.377	2.201	1.866	1.362
175	5.966	5.160	4.148	3.356	3.216	2.963	2.863	2.799	2.750	2.630	2.500	2.421	2.243	1.935	1.415
180	6.060	5.268	4.240	3.442	3.296	3.032	2.927	2.860	2.808	2.682	2.545	2.465	2.284	2.004	1.468
185	6.155	5.376	4.332	3.527	3.376	3.100	2.990	2.921	2.866	2.734	2.591	2.509	2.326	2.072	1.521
190	6.250	5.484	4.424	3.613	3.455	3.169	3.054	2.982	2.925	2.786	2.636	2.553	2.367	2.131	1.574
195	6.345	5.592	4.516	3.698	3.535	3.238	3.118	3.043	2.983	2.838	2.681	2.598	2.409	2.171	1.627
200	6.440	5.666	4.608	3.784	3.615	3.307	3.182	3.103	3.041	2.890	2.726	2.642	2.450	2.211	1.680
205	6.535	5.735	4.700	3.869	3.695	3.376	3.246	3.164	3.100	2.942	2.771	2.686	2.492	2.251	1.733
210	6.630	5.803	4.792	3.940	3.774	3.444	3.310	3.225	3.158	2.994	2.816	2.730	2.534	2.291	1.786
215	6.725	5.872	4.884	4.010	3.854	3.513	3.374	3.286	3.216	3.046	2.861	2.774	2.575	2.331	1.839
220	6.820	5.940	4.975	4.081	3.929	3.582	3.438	3.347	3.275	3.098	2.906	2.819	2.617	2.371	1.892
225	6.914	6.009	5.067	4.151	4.003	3.651	3.501	3.408	3.333	3.150	2.951	2.863	2.658	2.412	1.945
230	7.009	6.078	5.159	4.221	4.076	3.720	3.565	3.468	3.391	3.202	2.996	2.907	2.700	2.452	1.998
235	7.104	6.146	5.251	4.291	4.149	3.788	3.629	3.529	3.450	3.254	3.041	2.951	2.741	2.492	2.051
240	7.199	6.215	5.343	4.362	4.223	3.857	3.693	3.590	3.508	3.306	3.086	2.995	2.783	2.532	2.104
245	7.294	6.283	5.435	4.432	4.296	3.937	3.757	3.651	3.566	3.358	3.131	3.040	2.824	2.572	2.149
250	7.389	6.352	5.527	4.502	4.370	4.020	3.821	3.712	3.625	3.410	3.176	3.084	2.866	2.612	2.191
255	7.484	6.420	5.618	4.572	4.443	4.103	3.889	3.773	3.683	3.462	3.222	3.128	2.907	2.652	2.234
260	7.579	6.489	5.701	4.642	4.517	4.187	3.979	3.833	3.741	3.514	3.267	3.172	2.949	2.693	2.277
265	7.707	6.558	5.785	4.713	4.590	4.270	4.069	3.906	3.799	3.566	3.312	3.217	2.990	2.733	2.320
270	7.843	6.626	5.868	4.783	4.664	4.353	4.159	4.002	3.858	3.618	3.357	3.261	3.032	2.773	2.362
275	7.979	6.695	5.952	4.853	4.737	4.436	4.249	4.098	3.948	3.670	3.402	3.305	3.074	2.813	2.405
280	8.114	6.763	6.035	4.923	4.810	4.519	4.339	4.194	4.050	3.722	3.447	3.349	3.115	2.853	2.448
285	8.250	6.832	6.119	4.993	4.884	4.603	4.430	4.289	4.151	3.774	3.492	3.393	3.157	2.893	2.490
290	8.386	6.901	6.203	5.064	4.957	4.686	4.520	4.385	4.253	3.826	3.537	3.438	3.198	2.933	2.533
295	8.521	6.969	6.286	5.134	5.031	4.769	4.610	4.481	4.355	3.885	3.582	3.482	3.240	2.974	2.576
300	8.657	7.038	6.370	5.204	5.104	4.852	4.700	4.577	4.457	4.010	3.627	3.526	3.281	3.014	2.619
305	8.792	7.106	6.453	5.274	5.178	4.936	4.790	4.673	4.558	4.136	3.672	3.570	3.323	3.054	2.661
310	8.928	7.175	6.537	5.345	5.251	5.019	4.880	4.769	4.660	4.261	3.717	3.614	3.364	3.094	2.704
315	9.064	7.243	6.620	5.415	5.325	5.102	4.970	4.864	4.762	4.386	3.762	3.659	3.406	3.134	2.747
320	9.199	7.312	6.704	5.485	5.398	5.185	5.060	4.960	4.864	4.511	3.807	3.703	3.447	3.174	2.790
325	9.335	7.381	6.787	5.555	5.471	5.268	5.150	5.056	4.966	4.636	3.853	3.747	3.489	3.214	2.832
330	9.471	7.449	6.871	5.624	5.545	5.352	5.240	5.152	5.067	4.762	3.974	3.791	3.530	3.254	2.875
335	9.606	7.518	6.955	5.783	5.629	5.435	5.330	5.248	5.169	4.887	4.161	3.835	3.572	3.295	2.918
340	9.742	7.586	7.038	5.921	5.768	5.518	5.420	5.343	5.271	5.012	4.348	3.899	3.614	3.335	2.960
345	9.878	7.747	7.122	6.060	5.906	5.601	5.510	5.439	5.373	5.137	4.536	4.087	3.655	3.375	3.003
350	10.013	7.920	7.205	6.199	6.045	5.736	5.600	5.535	5.474	5.262	4.723	4.274	3.697	3.415	3.046
355	10.149	8.094	7.289	6.338	6.184	5.875	5.735	5.642	5.576	5.388	4.911	4.461	3.738	3.455	3.089
360	10.285	8.267	7.372	6.477	6.323	6.013	5.873	5.779	5.703	5.513	5.098	4.648	3.780	3.495	3.131
365	10.420	8.441	7.456	6.615	6.462	6.152	6.011	5.916	5.839	5.640	5.285	4.836	3.821	3.535	3.174

Thickness is intumescent only. Results also apply to beams with 4-side fire exposure subject to maximum DFT of 6.991 mm. Thicknesses in excess of 8.578 mm must be meshed at mid depth with FIRETEX J120 Scrim Mesh.

*Paul Egan*

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# CERTIFICATE No CF 5441

## SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 15 FIRETEX FX9500**

I/H Section Columns 90 minutes															
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of														
	350°C	400°C	450°C	500°C	510°C	530°C	539°C	545°C	550°C	563°C	580°C	600°C	650°C	700°C	750°C
50	3.892	2.010	1.634	1.303	1.248	1.142	1.107	1.080	1.059	1.008	0.949	0.886	0.746	0.615	0.388
55	4.106	2.408	1.777	1.414	1.354	1.239	1.200	1.170	1.147	1.092	1.028	0.959	0.806	0.662	0.478
60	4.321	2.806	1.969	1.580	1.516	1.392	1.351	1.318	1.294	1.233	1.164	1.089	0.924	0.771	0.583
65	4.535	3.205	2.175	1.746	1.678	1.546	1.501	1.466	1.440	1.375	1.299	1.218	1.042	0.881	0.687
70	4.749	3.603	2.428	1.912	1.839	1.699	1.652	1.614	1.587	1.517	1.435	1.348	1.160	0.990	0.791
75	4.963	3.929	2.681	2.079	2.001	1.853	1.802	1.762	1.733	1.659	1.571	1.478	1.278	1.099	0.895
80	5.178	4.101	2.934	2.252	2.164	2.006	1.952	1.911	1.880	1.800	1.707	1.608	1.396	1.209	0.999
85	5.392	4.273	3.186	2.428	2.328	2.157	2.103	2.059	2.026	1.942	1.843	1.737	1.514	1.318	1.103
90	5.606	4.445	3.439	2.603	2.492	2.299	2.237	2.194	2.164	2.084	1.979	1.867	1.632	1.427	1.207
95	5.747	4.617	3.692	2.779	2.655	2.441	2.369	2.322	2.288	2.205	2.115	1.997	1.750	1.537	1.311
100	5.888	4.789	3.911	2.954	2.819	2.584	2.501	2.450	2.413	2.320	2.219	2.123	1.868	1.646	1.415
105	6.029	4.961	4.044	3.130	2.983	2.726	2.634	2.578	2.537	2.436	2.323	2.215	1.986	1.755	1.519
110	6.169	5.134	4.176	3.305	3.147	2.869	2.766	2.706	2.661	2.551	2.428	2.307	2.104	1.864	1.624
115	6.310	5.306	4.309	3.481	3.311	3.011	2.898	2.834	2.786	2.666	2.532	2.398	2.172	1.974	1.728
120	6.451	5.478	4.442	3.657	3.475	3.154	3.030	2.962	2.910	2.782	2.636	2.490	2.235	2.083	1.832
125	6.591	5.630	4.575	3.832	3.639	3.296	3.163	3.090	3.034	2.897	2.741	2.581	2.298	2.145	1.936
130	6.732	5.723	4.707	3.965	3.803	3.439	3.295	3.218	3.159	3.012	2.845	2.673	2.361	2.188	2.040
135	6.873	5.816	4.840	4.084	3.940	3.581	3.427	3.346	3.283	3.127	2.949	2.765	2.424	2.230	2.126
140	7.014	5.909	4.973	4.203	4.056	3.724	3.559	3.474	3.407	3.243	3.054	2.856	2.487	2.272	2.166
145	7.154	6.002	5.106	4.322	4.172	3.866	3.692	3.602	3.532	3.358	3.158	2.948	2.550	2.315	2.206
150	7.295	6.095	5.238	4.441	4.288	3.978	3.824	3.730	3.656	3.473	3.262	3.040	2.613	2.357	2.245
155	7.436	6.188	5.371	4.560	4.404	4.089	3.941	3.858	3.780	3.589	3.366	3.131	2.676	2.399	2.285
160	7.577	6.280	5.504	4.679	4.520	4.199	4.049	3.966	3.889	3.704	3.471	3.223	2.739	2.442	2.324
165	7.693	6.373	5.625	4.798	4.636	4.309	4.157	4.072	4.003	3.819	3.575	3.314	2.802	2.484	2.364
170	7.805	6.466	5.705	4.917	4.752	4.420	4.266	4.177	4.106	3.925	3.679	3.406	2.865	2.526	2.403
175	7.918	6.559	5.786	5.036	4.868	4.530	4.374	4.283	4.209	4.023	3.784	3.498	2.928	2.568	2.443
180	8.030	6.652	5.866	5.155	4.984	4.641	4.482	4.388	4.313	4.121	3.886	3.589	2.991	2.611	2.482
185	8.142	6.745	5.947	5.275	5.100	4.751	4.590	4.494	4.416	4.219	3.977	3.681	3.054	2.653	2.522
190	8.255	6.838	6.027	5.394	5.216	4.861	4.698	4.599	4.519	4.317	4.067	3.773	3.117	2.695	2.561
195	8.367	6.931	6.108	5.513	5.332	4.972	4.806	4.705	4.623	4.415	4.158	3.864	3.180	2.738	2.601
200	8.480	7.024	6.188	5.623	5.448	5.082	4.914	4.810	4.726	4.513	4.249	3.948	3.242	2.780	2.640
205	8.592	7.117	6.269	5.698	5.565	5.192	5.023	4.916	4.830	4.611	4.339	4.030	3.305	2.822	2.680
210	8.705	7.210	6.349	5.773	5.656	5.303	5.131	5.021	4.933	4.709	4.430	4.113	3.368	2.865	2.719
215	8.817	7.303	6.430	5.848	5.733	5.413	5.239	5.127	5.036	4.807	4.521	4.196	3.431	2.907	2.759
220	8.929	7.396	6.510	5.923	5.810	5.524	5.347	5.232	5.140	4.905	4.611	4.278	3.494	2.949	2.798
225	9.042	7.488	6.591	5.998	5.887	5.627	5.455	5.338	5.243	5.003	4.702	4.361	3.557	2.991	2.838
230	9.154	7.581	6.671	6.073	5.964	5.709	5.563	5.443	5.346	5.101	4.792	4.444	3.620	3.034	2.877
235	9.267	7.674	6.752	6.148	6.041	5.792	5.658	5.549	5.450	5.198	4.883	4.527	3.683	3.076	2.917
240	9.379	7.767	6.832	6.223	6.119	5.874	5.743	5.646	5.553	5.296	4.974	4.609	3.746	3.118	2.956
245	9.491	7.860	6.913	6.298	6.196	5.956	5.828	5.733	5.650	5.394	5.064	4.692	3.809	3.161	2.996
250	9.604	7.953	7.003	6.374	6.273	6.038	5.913	5.821	5.739	5.492	5.155	4.775	3.872	3.203	3.035
255	9.716	8.045	7.074	6.449	6.350	6.120	5.998	5.908	5.828	5.590	5.246	4.857	3.965	3.245	3.075
260	9.829	8.138	7.154	6.524	6.427	6.203	6.083	5.995	5.917	5.686	5.336	4.940	4.059	3.288	3.114
265	9.941	8.227	7.235	6.599	6.504	6.285	6.168	6.082	6.006	5.780	5.427	5.023	4.153	3.330	3.154
270	10.053	8.316	7.315	6.674	6.581	6.367	6.253	6.169	6.095	5.875	5.518	5.105	4.247	3.372	3.194
275	10.166	8.405	7.396	6.749	6.658	6.449	6.338	6.257	6.184	5.970	5.608	5.188	4.341	3.414	3.233
280	10.278	8.495	7.476	6.824	6.736	6.532	6.423	6.344	6.273	6.065	5.713	5.271	4.434	3.457	3.273
285	10.391	8.584	7.557	6.899	6.813	6.614	6.509	6.431	6.362	6.160	5.818	5.353	4.528	3.499	3.312
290	10.503	8.673	7.640	6.974	6.890	6.696	6.594	6.518	6.451	6.254	5.924	5.436	4.622	3.541	3.352
295	10.616	8.762	7.722	7.050	6.967	6.778	6.679	6.605	6.541	6.349	6.029	5.519	4.716	3.584	3.391
300	10.728	8.851	7.804	7.125	7.044	6.861	6.764	6.693	6.630	6.444	6.134	5.602	4.810	3.626	3.431
305	10.840	8.940	7.886	7.200	7.121	6.943	6.849	6.780	6.719	6.539	6.239	5.723	4.904	3.668	3.470
310	10.953	9.027	7.968	7.275	7.198	7.025	6.934	6.867	6.808	6.634	6.344	5.847	5.098	3.711	3.510
315	11.065	9.115	8.050	7.350	7.275	7.107	7.019	6.954	6.897	6.728	6.449	5.971	5.092	3.753	3.549
320	11.178	9.203	8.132	7.425	7.353	7.190	7.104	7.041	6.986	6.823	6.554	6.095	5.185	3.795	3.589
325	11.290	9.291	8.214	7.500	7.430	7.272	7.189	7.129	7.075	6.918	6.659	6.219	5.279	3.838	3.628
330	11.402	9.379	8.296	7.575	7.507	7.354	7.274	7.216	7.164	7.013	6.764	6.343	5.373	3.903	3.668
335	11.515	9.467	8.378	7.650	7.584	7.436	7.359	7.303	7.253	7.108	6.869	6.467	5.467	4.000	3.707
340	11.627	9.555	8.460	7.725	7.663	7.519	7.444	7.390	7.342	7.202	6.974	6.591	5.561	4.298	3.747
345	11.740	9.643	8.542	7.800	7.748	7.608	7.530	7.478	7.431	7.297	7.079	6.715	5.681	4.495	3.786
350	11.852	9.730	8.624	7.875	7.827	7.689	7.617	7.565	7.520	7.392	7.184	6.839	5.826	4.692	3.826
355	11.965	9.817	8.706	7.950	7.907	7.771	7.701	7.642	7.624	7.487	7.289	6.963	5.971	4.889	3.865
360	12.077	9.904	8.788	8.025	7.982	7.847	7.777	7.712	7.683	7.582	7.394	7.086	6.116	5.087	4.008
365	12.189	9.991	8.870	8.100	8.058	7.924	7.854	7.792	7.803	7.747	7.499	7.210	6.261	5.284	4.176

Thickness is intumescent only. Results also apply to beams with 4-side fire exposure subject to maximum DFT of 6.991 mm. Thicknesses in excess of 8.578 mm must be meshed at mid depth with FIRETEX J120 Scrim Cloth.



# CERTIFICATE No CF 5441 SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 16 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	I/H Section Columns 105 minutes														
	Thickness (mm) Required for a Design Temperature of														
	350°C	400°C	450°C	500°C	510°C	530°C	539°C	545°C	550°C	563°C	580°C	600°C	650°C	700°C	750°C
50	4.795	3.628	2.008	1.733	1.670	1.550	1.512	1.480	1.458	1.400	1.335	1.267	1.117	0.995	0.851
55	5.110	3.951	2.455	1.883	1.815	1.683	1.642	1.607	1.583	1.520	1.449	1.374	1.211	1.076	0.917
60	5.425	4.275	2.903	2.092	2.019	1.877	1.833	1.795	1.769	1.701	1.623	1.542	1.365	1.223	1.061
65	5.758	4.598	3.350	2.399	2.274	2.071	2.023	1.983	1.955	1.881	1.797	1.709	1.520	1.370	1.204
70	6.116	4.922	3.798	2.718	2.576	2.326	2.249	2.189	2.148	2.062	1.971	1.877	1.675	1.517	1.347
75	6.474	5.245	4.103	3.037	2.878	2.599	2.507	2.439	2.391	2.274	2.150	2.044	1.830	1.664	1.491
80	6.832	5.569	4.379	3.356	3.180	2.872	2.766	2.688	2.634	2.498	2.352	2.216	1.985	1.811	1.634
85	7.190	5.784	4.655	3.676	3.482	3.145	3.024	2.938	2.877	2.723	2.554	2.390	2.134	1.958	1.777
90	7.548	5.986	4.931	3.949	3.784	3.418	3.283	3.188	3.119	2.948	2.755	2.564	2.253	2.104	1.921
95	7.759	6.187	5.207	4.149	4.003	3.692	3.541	3.438	3.362	3.173	2.957	2.738	2.373	2.200	2.064
100	7.949	6.388	5.483	4.349	4.186	3.925	3.800	3.687	3.605	3.398	3.159	2.912	2.493	2.291	2.159
105	8.139	6.589	5.660	4.548	4.369	4.077	3.980	3.911	3.848	3.623	3.361	3.086	2.612	2.382	2.228
110	8.328	6.791	5.757	4.748	4.552	4.230	4.129	4.058	4.003	3.848	3.563	3.260	2.732	2.473	2.296
115	8.518	6.992	5.854	4.947	4.735	4.383	4.278	4.205	4.148	3.998	3.764	3.434	2.851	2.564	2.364
120	8.707	7.193	5.951	5.147	4.918	4.536	4.427	4.352	4.293	4.138	3.935	3.608	2.971	2.655	2.433
125	8.897	7.394	6.048	5.347	5.101	4.689	4.577	4.499	4.438	4.278	4.069	3.782	3.090	2.747	2.501
130	9.086	7.595	6.145	5.546	5.284	4.842	4.726	4.646	4.583	4.418	4.203	3.934	3.210	2.838	2.569
135	9.276	7.724	6.242	5.669	5.467	4.995	4.875	4.793	4.728	4.558	4.337	4.063	3.329	2.929	2.638
140	9.465	7.852	6.339	5.757	5.628	5.147	5.024	4.940	4.873	4.698	4.471	4.191	3.449	3.020	2.706
145	9.655	7.980	6.435	5.846	5.716	5.300	5.173	5.087	5.018	4.838	4.605	4.320	3.568	3.111	2.774
150	9.845	8.108	6.532	5.935	5.805	5.453	5.322	5.234	5.163	4.978	4.739	4.448	3.688	3.202	2.843
155	10.034	8.237	6.629	6.024	5.894	5.606	5.471	5.381	5.308	5.118	4.873	4.577	3.807	3.293	2.911
160	10.224	8.365	6.726	6.113	5.982	5.696	5.615	5.528	5.453	5.258	5.007	4.705	3.925	3.384	2.979
165	10.413	8.493	6.823	6.201	6.071	5.785	5.702	5.647	5.598	5.398	5.141	4.834	4.039	3.475	3.047
170	10.603	8.621	6.920	6.290	6.160	5.875	5.790	5.734	5.687	5.538	5.275	4.962	4.154	3.566	3.116
175	10.792	8.750	7.017	6.379	6.248	5.965	5.878	5.820	5.773	5.649	5.409	5.091	4.269	3.658	3.184
180	10.982	8.878	7.114	6.468	6.337	6.054	5.966	5.907	5.859	5.733	5.543	5.219	4.383	3.749	3.252
185	11.172	9.006	7.211	6.557	6.425	6.144	6.053	5.994	5.944	5.816	5.649	5.348	4.498	3.840	3.321
190	11.361	9.134	7.308	6.645	6.514	6.233	6.141	6.080	6.030	5.900	5.730	5.476	4.612	3.928	3.389
195	11.551	9.262	7.404	6.734	6.603	6.323	6.229	6.167	6.116	5.984	5.812	5.605	4.727	4.013	3.457
200	11.740	9.391	7.501	6.823	6.691	6.412	6.317	6.254	6.202	6.067	5.893	5.685	4.842	4.099	3.526
205	11.930	9.519	7.600	6.912	6.780	6.502	6.404	6.340	6.287	6.151	5.974	5.764	4.956	4.185	3.594
210	12.119	9.647	7.737	7.001	6.869	6.591	6.492	6.427	6.373	6.235	6.056	5.843	5.071	4.271	3.662
215	12.309	9.775	7.874	7.090	6.957	6.681	6.580	6.513	6.459	6.318	6.137	5.922	5.185	4.356	3.731
220	12.498	9.904	8.012	7.178	7.046	6.771	6.668	6.600	6.545	6.402	6.218	6.001	5.300	4.442	3.799
225	-	10.032	8.149	7.267	7.134	6.860	6.755	6.687	6.630	6.486	6.300	6.081	5.415	4.528	3.867
230	-	10.160	8.287	7.356	7.223	6.950	6.843	6.773	6.716	6.569	6.381	6.160	5.529	4.613	3.943
235	-	10.288	8.424	7.445	7.312	7.039	6.931	6.860	6.802	6.653	6.462	6.239	5.635	4.699	4.020
240	-	10.417	8.562	7.534	7.400	7.129	7.019	6.947	6.888	6.736	6.544	6.318	5.722	4.785	4.096
245	-	10.545	8.699	7.642	7.489	7.218	7.106	7.033	6.973	6.820	6.625	6.397	5.810	4.871	4.173
250	-	10.673	8.837	7.796	7.578	7.308	7.194	7.120	7.059	6.904	6.706	6.477	5.897	4.956	4.250
255	-	10.801	8.974	7.950	7.722	7.397	7.282	7.207	7.145	6.987	6.787	6.556	5.984	5.042	4.326
260	-	10.930	9.112	8.104	7.879	7.487	7.370	7.293	7.231	7.071	6.869	6.635	6.071	5.128	4.403
265	-	11.058	9.249	8.257	8.036	7.577	7.457	7.380	7.316	7.155	6.950	6.714	6.159	5.214	4.479
270	-	11.186	9.387	8.411	8.194	7.726	7.545	7.466	7.402	7.238	7.031	6.794	6.246	5.299	4.556
275	-	11.314	9.524	8.565	8.351	7.891	7.668	7.553	7.488	7.322	7.113	6.873	6.333	5.385	4.633
280	-	11.443	9.661	8.718	8.509	8.057	7.837	7.683	7.574	7.406	7.194	6.952	6.421	5.471	4.709
285	-	11.571	9.799	8.872	8.666	8.222	8.006	7.855	7.725	7.489	7.275	7.031	6.508	5.557	4.786
290	-	11.699	9.936	9.026	8.823	8.387	8.175	8.027	7.899	7.573	7.357	7.110	6.595	5.653	4.863
295	-	11.827	10.074	9.180	8.981	8.552	8.344	8.198	8.073	7.727	7.438	7.190	6.683	5.763	4.939
300	-	11.955	10.211	9.333	9.138	8.718	8.513	8.370	8.247	7.907	7.519	7.269	6.770	5.874	5.016
305	-	12.084	10.349	9.487	9.296	8.883	8.682	8.541	8.421	8.086	7.608	7.348	6.857	5.984	5.092
310	-	12.212	10.486	9.641	9.453	9.048	8.851	8.713	8.594	8.266	7.796	7.427	6.945	6.095	5.169
315	-	12.340	10.624	9.794	9.610	9.213	9.020	8.884	8.768	8.446	7.984	7.506	7.032	6.205	5.246
320	-	-	10.761	9.948	9.768	9.378	9.189	9.056	8.942	8.625	8.172	7.586	7.119	6.316	5.322
325	-	-	10.899	10.102	9.925	9.544	9.357	9.227	9.116	8.805	8.359	7.769	7.207	6.426	5.399
330	-	-	11.036	10.256	10.083	9.709	9.526	9.399	9.290	8.985	8.547	7.966	7.294	6.537	5.476
335	-	-	11.173	10.409	10.240	9.874	9.695	9.571	9.463	9.164	8.735	8.163	7.381	6.647	5.552
340	-	-	11.311	10.563	10.398	10.039	9.864	9.742	9.637	9.344	8.923	8.360	7.469	6.758	5.643
345	-	-	11.448	10.717	10.555	10.205	10.033	9.914	9.811	9.524	9.111	8.557	7.556	6.868	5.767
350	-	-	11.586	10.871	10.712	10.370	10.202	10.085	9.985	9.703	9.299	8.755	7.699	6.979	5.891
355	-	-	11.723	11.024	10.870	10.535	10.371	10.257	10.159	9.883	9.487	8.952	7.888	7.089	6.016
360	-	-	11.861	11.178	11.027	10.700	10.540	10.428	10.332	10.063	9.675	9.149	8.077	7.200	6.140
365	-	-	11.998	11.332	11.185	10.866	10.709	10.600	10.506	10.242	9.863	9.346	8.265	7.310	6.264

Thickness is intumescent only. Results also apply to beams with 4-side fire exposure subject to maximum DFT of 6.991 mm. Thicknesses in excess of 8.578 mm must be meshed at mid depth with FIRETEX J120 Scrim Cloth.

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**CERTIFICATE No CF 5441**  
**SHERWIN-WILLIAMS PROTECTIVE &**  
**MARINE COATINGS**

**Table 17 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	I/H Section Columns 120 minutes														
	Thickness (mm) Required for a Design Temperature of														
	350°C	400°C	450°C	500°C	510°C	530°C	539°C	545°C	550°C	563°C	580°C	600°C	650°C	700°C	750°C
50	5.832	4.717	3.486	2.086	1.948	1.904	1.904	1.881	1.857	1.793	1.721	1.648	1.488	1.374	1.250
55	6.502	5.173	3.845	2.592	2.430	2.338	2.056	2.044	2.018	1.948	1.870	1.790	1.615	1.490	1.352
60	7.173	5.628	4.348	3.097	2.913	2.588	2.486	2.403	2.348	2.208	2.082	1.995	1.807	1.674	1.535
65	7.843	6.047	4.851	3.603	3.396	3.037	2.916	2.822	2.759	2.597	2.421	2.248	1.999	1.859	1.718
70	-	6.467	5.355	4.079	3.878	3.486	3.346	3.241	3.169	2.987	2.783	2.571	2.211	2.043	1.900
75	-	6.887	5.729	4.520	4.300	3.924	3.776	3.659	3.580	3.377	3.145	2.893	2.455	2.217	2.083
80	-	7.307	6.214	4.962	4.721	4.298	4.143	4.036	3.965	3.767	3.507	3.215	2.699	2.384	2.214
85	-	7.663	6.219	5.403	5.143	4.672	4.491	4.370	4.284	4.080	3.869	3.538	2.943	2.551	2.334
90	-	7.882	6.465	5.676	5.565	5.046	4.839	4.704	4.604	4.365	4.111	3.860	3.187	2.718	2.453
95	-	8.100	6.710	5.804	5.706	5.419	5.187	5.037	4.923	4.649	4.352	4.062	3.431	2.885	2.573
100	-	8.318	6.955	5.933	5.817	5.651	5.535	5.371	5.243	4.934	4.594	4.258	3.676	3.052	2.692
105	-	8.536	7.200	6.061	5.928	5.741	5.676	5.632	5.562	5.219	4.835	4.454	3.900	3.219	2.812
110	-	8.754	7.445	6.189	6.039	5.830	5.764	5.719	5.681	5.503	5.076	4.650	4.038	3.386	2.931
115	-	8.973	7.663	6.318	6.149	5.919	5.852	5.806	5.767	5.660	5.317	4.847	4.175	3.552	3.051
120	-	9.191	7.838	6.446	6.260	6.009	5.940	5.893	5.853	5.745	5.558	5.043	4.313	3.719	3.171
125	-	9.409	8.013	6.574	6.371	6.098	6.027	5.979	5.939	5.830	5.673	5.239	4.451	3.883	3.290
130	-	9.627	8.187	6.703	6.482	6.187	6.115	6.066	6.025	5.914	5.757	5.436	4.589	4.014	3.410
135	-	9.846	8.362	6.831	6.593	6.277	6.203	6.153	6.111	5.999	5.840	5.617	4.727	4.145	3.529
140	-	10.064	8.537	6.960	6.703	6.366	6.290	6.240	6.197	6.083	5.924	5.701	4.865	4.275	3.649
145	-	10.282	8.712	7.088	6.814	6.455	6.378	6.327	6.283	6.168	6.007	5.785	5.003	4.406	3.768
150	-	10.500	8.886	7.216	6.925	6.545	6.466	6.413	6.370	6.253	6.091	5.869	5.141	4.536	3.888
155	-	10.718	9.061	7.345	7.036	6.634	6.554	6.500	6.456	6.337	6.174	5.952	5.279	4.667	4.007
160	-	10.937	9.236	7.473	7.146	6.723	6.641	6.587	6.542	6.422	6.258	6.036	5.417	4.798	4.127
165	-	11.155	9.411	7.603	7.257	6.813	6.729	6.674	6.628	6.506	6.341	6.120	5.554	4.928	4.246
170	-	11.373	9.585	7.755	7.368	6.902	6.817	6.760	6.714	6.591	6.424	6.203	5.658	5.059	4.366
175	-	11.591	9.760	7.907	7.479	6.992	6.905	6.847	6.800	6.675	6.508	6.287	5.741	5.189	4.485
180	-	11.810	9.935	8.059	7.589	7.081	6.992	6.934	6.886	6.760	6.591	6.371	5.824	5.320	4.605
185	-	12.028	10.110	8.211	7.739	7.170	7.080	7.021	6.972	6.845	6.675	6.455	5.907	5.451	4.724
190	-	12.246	10.284	8.363	7.890	7.260	7.168	7.108	7.058	6.929	6.758	6.538	5.990	5.581	4.843
195	-	12.464	10.459	8.515	8.041	7.349	7.256	7.194	7.144	7.014	6.842	6.622	6.073	5.666	4.963
200	-	-	10.634	8.668	8.193	7.438	7.343	7.281	7.231	7.098	6.925	6.706	6.156	5.740	5.082
205	-	-	10.809	8.820	8.344	7.528	7.431	7.368	7.317	7.183	7.009	6.790	6.239	5.814	5.202
210	-	-	10.983	8.972	8.496	7.633	7.519	7.455	7.403	7.267	7.092	6.873	6.322	5.888	5.321
215	-	-	11.158	9.124	8.647	7.790	7.616	7.542	7.489	7.352	7.176	6.957	6.405	5.962	5.441
220	-	-	11.333	9.276	8.798	7.946	7.775	7.657	7.575	7.437	7.259	7.041	6.487	6.036	5.560
225	-	-	11.508	9.428	8.950	8.102	7.933	7.817	7.719	7.521	7.343	7.124	6.570	6.110	5.651
230	-	-	11.683	9.581	9.101	8.258	8.092	7.978	7.881	7.616	7.426	7.208	6.653	6.184	5.724
235	-	-	11.857	9.733	9.252	8.414	8.251	8.138	8.043	7.782	7.509	7.292	6.736	6.258	5.797
240	-	-	12.032	9.885	9.404	8.571	8.410	8.299	8.205	7.948	7.593	7.376	6.819	6.332	5.870
245	-	-	12.207	10.037	9.555	8.727	8.568	8.459	8.367	8.114	7.762	7.459	6.902	6.406	5.943
250	-	-	12.382	10.189	9.706	8.883	8.727	8.620	8.529	8.280	7.933	7.543	6.985	6.480	6.016
255	-	-	-	10.341	9.858	9.039	8.886	8.781	8.691	8.446	8.104	7.662	7.068	6.554	6.090
260	-	-	-	10.494	10.009	9.195	9.045	8.941	8.853	8.611	8.275	7.839	7.151	6.628	6.163
265	-	-	-	10.646	10.161	9.352	9.204	9.102	9.015	8.777	8.446	8.016	7.234	6.702	6.236
270	-	-	-	10.798	10.312	9.508	9.362	9.262	9.177	8.943	8.617	8.193	7.317	6.776	6.309
275	-	-	-	10.950	10.463	9.664	9.521	9.423	9.339	9.109	8.788	8.370	7.400	6.850	6.382
280	-	-	-	11.102	10.615	9.820	9.680	9.583	9.501	9.275	8.960	8.547	7.483	6.924	6.455
285	-	-	-	11.254	10.766	9.977	9.839	9.744	9.663	9.441	9.131	8.724	7.565	6.998	6.528
290	-	-	-	11.406	10.917	10.133	9.997	9.904	9.825	9.607	9.302	8.901	7.717	7.072	6.601
295	-	-	-	11.559	11.069	10.289	10.156	10.065	9.987	9.773	9.473	9.078	7.907	7.146	6.674
300	-	-	-	11.711	11.220	10.445	10.315	10.225	10.149	9.939	9.644	9.254	8.097	7.220	6.747
305	-	-	-	11.863	11.372	10.601	10.474	10.386	10.311	10.104	9.815	9.431	8.286	7.293	6.820
310	-	-	-	12.015	11.523	10.758	10.632	10.546	10.473	10.270	9.986	9.608	8.476	7.367	6.893
315	-	-	-	12.167	11.674	10.914	10.791	10.707	10.635	10.436	10.157	9.785	8.666	7.441	6.966
320	-	-	-	12.319	11.826	11.070	10.950	10.867	10.797	10.602	10.328	9.962	8.866	7.515	7.039
325	-	-	-	12.472	11.977	11.226	11.109	11.028	10.959	10.768	10.499	10.139	9.045	7.589	7.112
330	-	-	-	12.624	12.128	11.382	11.268	11.189	11.121	10.934	10.671	10.316	9.235	7.779	7.185
335	-	-	-	-	12.280	11.539	11.426	11.349	11.283	11.100	10.842	10.493	9.425	7.979	7.258
340	-	-	-	-	12.431	11.695	11.585	11.510	11.445	11.266	11.013	10.670	9.615	8.179	7.331
345	-	-	-	-	12.582	11.851	11.744	11.670	11.607	11.431	11.184	10.847	9.804	8.379	7.404
350	-	-	-	-	-	12.007	11.903	11.831	11.769	11.597	11.355	11.023	9.994	8.578	7.477
355	-	-	-	-	-	12.163	12.061	11.991	11.931	11.763	11.526	11.200	10.184	8.778	7.551
360	-	-	-	-	-	12.320	12.220	12.152	12.093	11.929	11.697	11.377	10.374	8.978	7.665
365	-	-	-	-	-	12.476	12.379	12.312	12.255	12.095	11.868	11.554	10.563	9.177	7.843

Thickness is intumescent only. Results also apply to beams with 4-side fire exposure subject to maximum DFT of 6.991 mm. Thicknesses in excess of 8.578 mm must be meshed at mid depth with FIRETEX J120 Scrim Cloth.

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E/038

Issued: 17<sup>th</sup> June 2016  
Reissued: 16<sup>th</sup> June 2021  
Valid to: 15<sup>th</sup> June 2026

## CERTIFICATE No CF 5441 SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 18 FIRETEX FX9500**

I/H Section Columns 150 minutes															
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of														
	350°C	400°C	450°C	500°C	510°C	530°C	539°C	545°C	550°C	563°C	580°C	600°C	650°C	700°C	750°C
50	-	-	6.218	5.118	4.603	3.893	3.644	3.486	3.486	3.486	3.486	3.393	2.240	1.991	1.904
55	-	-	6.953	5.870	5.748	5.390	5.078	4.862	4.707	4.329	3.939	3.649	2.988	2.550	2.333
60	-	-	-	6.342	6.176	5.910	5.812	5.754	5.710	5.611	5.105	4.546	3.736	3.110	2.802
65	-	-	-	6.813	6.605	6.264	6.137	6.061	6.002	5.868	5.730	5.609	4.437	3.669	3.292
70	-	-	-	7.284	7.033	6.618	6.462	6.367	6.295	6.125	5.945	5.782	5.128	4.204	3.781
75	-	-	-	7.756	7.462	6.972	6.786	6.674	6.587	6.381	6.161	5.955	5.631	4.724	4.167
80	-	-	-	-	7.890	7.326	7.111	6.981	6.879	6.638	6.377	6.128	5.712	5.243	4.529
85	-	-	-	-	-	7.681	7.436	7.287	7.171	6.895	6.593	6.302	5.793	5.627	4.891
90	-	-	-	-	-	8.035	7.736	7.594	7.463	7.151	6.808	6.475	5.874	5.696	5.253
95	-	-	-	-	-	-	8.012	7.865	7.742	7.408	7.024	6.648	5.955	5.765	5.608
100	-	-	-	-	-	-	8.287	8.137	8.011	7.666	7.240	6.821	6.036	5.834	5.670
105	-	-	-	-	-	-	8.563	8.408	8.279	7.926	7.455	6.994	6.117	5.903	5.732
110	-	-	-	-	-	-	8.839	8.680	8.548	8.187	7.684	7.168	6.198	5.972	5.794
115	-	-	-	-	-	-	9.115	8.951	8.816	8.447	7.937	7.341	6.278	6.040	5.856
120	-	-	-	-	-	-	9.391	9.222	9.084	8.708	8.189	7.514	6.359	6.109	5.917
125	-	-	-	-	-	-	9.667	9.494	9.353	8.968	8.442	7.727	6.440	6.178	5.979
130	-	-	-	-	-	-	9.943	9.765	9.621	9.228	8.694	7.975	6.521	6.247	6.041
135	-	-	-	-	-	-	10.218	10.037	9.889	9.489	8.947	8.223	6.602	6.316	6.103
140	-	-	-	-	-	-	10.494	10.308	10.158	9.749	9.199	8.471	6.683	6.384	6.165
145	-	-	-	-	-	-	10.770	10.579	10.426	10.010	9.452	8.719	6.764	6.453	6.227
150	-	-	-	-	-	-	11.046	10.851	10.694	10.270	9.705	8.967	6.844	6.522	6.289
155	-	-	-	-	-	-	11.322	11.122	10.963	10.530	9.957	9.215	6.925	6.591	6.350
160	-	-	-	-	-	-	11.598	11.394	11.231	10.791	10.210	9.463	7.006	6.660	6.412
165	-	-	-	-	-	-	11.874	11.665	11.499	11.051	10.462	9.711	7.087	6.729	6.474
170	-	-	-	-	-	-	12.149	11.936	11.768	11.312	10.715	9.959	7.168	6.797	6.536
175	-	-	-	-	-	-	12.425	12.208	12.036	11.572	10.967	10.207	7.249	6.866	6.598
180	-	-	-	-	-	-	12.701	12.479	12.304	11.832	11.220	10.455	7.330	6.935	6.660
185	-	-	-	-	-	-	-	-	12.573	12.093	11.472	10.703	7.410	7.004	6.722
190	-	-	-	-	-	-	-	-	-	12.353	11.725	10.951	7.491	7.073	6.784
195	-	-	-	-	-	-	-	-	-	-	12.614	11.977	11.199	7.572	7.141
200	-	-	-	-	-	-	-	-	-	-	-	12.230	11.448	7.853	7.210
205	-	-	-	-	-	-	-	-	-	-	-	12.483	11.696	8.213	7.279
210	-	-	-	-	-	-	-	-	-	-	-	-	11.944	8.573	7.348
215	-	-	-	-	-	-	-	-	-	-	-	-	12.192	8.932	7.417
220	-	-	-	-	-	-	-	-	-	-	-	-	12.440	9.292	7.486
225	-	-	-	-	-	-	-	-	-	-	-	-	-	9.652	7.554
230	-	-	-	-	-	-	-	-	-	-	-	-	-	10.011	7.677
235	-	-	-	-	-	-	-	-	-	-	-	-	-	10.371	7.875
240	-	-	-	-	-	-	-	-	-	-	-	-	-	10.731	8.074
245	-	-	-	-	-	-	-	-	-	-	-	-	-	11.090	8.273
250	-	-	-	-	-	-	-	-	-	-	-	-	-	11.450	8.472
255	-	-	-	-	-	-	-	-	-	-	-	-	-	11.810	8.671
260	-	-	-	-	-	-	-	-	-	-	-	-	-	12.169	8.870
265	-	-	-	-	-	-	-	-	-	-	-	-	-	12.529	9.069
270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.267
275	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.466
280	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.665
285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.864
290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.063
295	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.262
300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.461
305	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.659
310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.858
315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.057
320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.256
325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.455
330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.654
335	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.853
340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.052
345	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.250
350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.449
355	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.648
360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
365	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.616

Thickness is intumescent only. Results also apply to beams with 4-side fire exposure subject to maximum DFT of 6.991 mm. Thicknesses in excess of 8.578 mm must be meshed at mid depth with FIRETEX J120 Scrim Cloth.





# CERTIFICATE No CF 5441

## SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

Table 19 FIRETEX FX9500

Hollow Section Columns 15 Minutes											
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of										
	350°C	400°C	450°C	500°C	520°C	550°C	575°C	600°C	650°C	700°C	750°C
40	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
45	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
50	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
55	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
60	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
65	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
70	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
75	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
80	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
85	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
90	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
95	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
100	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
105	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
110	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
115	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
120	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
125	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
130	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
135	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
140	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
145	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
150	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
155	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
160	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
165	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
170	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
175	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
180	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
185	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
190	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
195	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
200	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
205	0.469	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
210	0.502	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
215	0.535	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
220	0.568	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
225	0.600	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
230	0.633	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
235	0.666	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
240	0.699	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
245	0.732	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
250	0.765	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
255	0.798	0.456	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
260	0.830	0.486	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
265	0.863	0.515	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
270	0.896	0.545	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
275	0.929	0.575	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
280	0.962	0.604	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
285	0.995	0.634	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
290	1.028	0.663	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
295	1.060	0.693	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
300	1.093	0.722	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
305	1.126	0.752	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
310	1.159	0.781	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
315	1.192	0.811	0.459	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
320	1.225	0.841	0.486	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
325	1.258	0.870	0.513	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
330	1.290	0.900	0.541	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446

Thickness is intumescent only. Results apply to circular and square/rectangular hollow columns. Results also apply to square/rectangular beams exposed on all four sides limited to a maximum protection thickness of 8.608 mm.

## CERTIFICATE No CF 5441 SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

Table 20 FIRETEX FX9500

Section Factor up to m <sup>-1</sup>	Hollow Section Columns 30 Minutes										
	Thickness (mm) Required for a Design Temperature of										
	350°C	400°C	450°C	500°C	520°C	550°C	575°C	600°C	650°C	700°C	750°C
40	0.592	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
45	0.643	0.450	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
50	0.693	0.496	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
55	0.743	0.542	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
60	0.794	0.589	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
65	0.844	0.635	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
70	0.894	0.681	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
75	0.944	0.727	0.459	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
80	0.995	0.773	0.504	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
85	1.045	0.820	0.549	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
90	1.095	0.866	0.594	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
95	1.146	0.912	0.638	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
100	1.196	0.958	0.683	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
105	1.246	1.005	0.728	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
110	1.296	1.051	0.773	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
115	1.347	1.097	0.818	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
120	1.397	1.143	0.862	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
125	1.447	1.189	0.907	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
130	1.498	1.236	0.952	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
135	1.548	1.282	0.997	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
140	1.598	1.328	1.042	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
145	1.649	1.374	1.086	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
150	1.699	1.420	1.131	0.448	0.446	0.446	0.446	0.446	0.446	0.446	0.446
155	1.749	1.467	1.176	0.499	0.446	0.446	0.446	0.446	0.446	0.446	0.446
160	1.799	1.513	1.221	0.549	0.446	0.446	0.446	0.446	0.446	0.446	0.446
165	1.850	1.559	1.266	0.600	0.472	0.446	0.446	0.446	0.446	0.446	0.446
170	1.900	1.605	1.310	0.650	0.521	0.446	0.446	0.446	0.446	0.446	0.446
175	1.950	1.651	1.355	0.700	0.571	0.446	0.446	0.446	0.446	0.446	0.446
180	2.001	1.698	1.400	0.751	0.620	0.446	0.446	0.446	0.446	0.446	0.446
185	2.051	1.744	1.445	0.801	0.669	0.466	0.446	0.446	0.446	0.446	0.446
190	2.101	1.790	1.490	0.851	0.718	0.513	0.446	0.446	0.446	0.446	0.446
195	2.151	1.836	1.534	0.902	0.767	0.560	0.446	0.446	0.446	0.446	0.446
200	2.202	1.882	1.579	0.952	0.817	0.608	0.446	0.446	0.446	0.446	0.446
205	2.252	1.929	1.624	1.003	0.866	0.655	0.470	0.446	0.446	0.446	0.446
210	2.302	1.975	1.669	1.053	0.915	0.702	0.515	0.446	0.446	0.446	0.446
215	2.353	2.021	1.713	1.103	0.964	0.749	0.561	0.446	0.446	0.446	0.446
220	2.403	2.067	1.758	1.154	1.014	0.797	0.607	0.446	0.446	0.446	0.446
225	2.453	2.113	1.803	1.204	1.063	0.844	0.652	0.446	0.446	0.446	0.446
230	2.504	2.160	1.848	1.255	1.112	0.891	0.698	0.487	0.446	0.446	0.446
235	2.554	2.206	1.893	1.305	1.161	0.939	0.744	0.531	0.446	0.446	0.446
240	2.604	2.252	1.937	1.355	1.210	0.986	0.789	0.575	0.446	0.446	0.446
245	2.654	2.298	1.982	1.406	1.260	1.033	0.835	0.619	0.446	0.446	0.446
250	2.705	2.344	2.027	1.456	1.309	1.081	0.881	0.663	0.446	0.446	0.446
255	2.755	2.391	2.072	1.507	1.358	1.128	0.926	0.707	0.446	0.446	0.446
260	2.805	2.437	2.117	1.557	1.407	1.175	0.972	0.752	0.446	0.446	0.446
265	2.856	2.483	2.161	1.607	1.456	1.222	1.018	0.796	0.446	0.446	0.446
270	2.906	2.529	2.206	1.658	1.506	1.270	1.064	0.840	0.446	0.446	0.446
275	2.956	2.575	2.251	1.708	1.555	1.317	1.109	0.884	0.446	0.446	0.446
280	3.006	2.622	2.296	1.758	1.604	1.364	1.155	0.928	0.458	0.446	0.446
285	3.057	2.668	2.341	1.809	1.653	1.412	1.201	0.972	0.498	0.446	0.446
290	3.107	2.714	2.385	1.859	1.702	1.459	1.246	1.016	0.537	0.446	0.446
295	3.161	2.760	2.430	1.910	1.752	1.506	1.292	1.060	0.576	0.446	0.446
300	3.248	2.806	2.475	1.960	1.801	1.553	1.338	1.104	0.616	0.446	0.446
305	3.335	2.853	2.520	2.010	1.850	1.601	1.383	1.148	0.655	0.446	0.446
310	3.421	2.899	2.565	2.061	1.899	1.648	1.429	1.192	0.694	0.446	0.446
315	3.508	2.945	2.609	2.111	1.948	1.695	1.475	1.236	0.734	0.446	0.446
320	3.595	2.991	2.654	2.162	1.998	1.743	1.520	1.280	0.773	0.446	0.446
325	3.682	3.037	2.699	2.212	2.047	1.790	1.566	1.324	0.812	0.446	0.446
330	3.768	3.084	2.744	2.262	2.096	1.837	1.612	1.368	0.852	0.446	0.446

Thickness is intumescent only. Results apply to circular and square/rectangular hollow columns. Results also apply to square/rectangular beams exposed on all four sides limited to a maximum protection thickness of 8.608 mm.

## CERTIFICATE No CF 5441 SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

Table 21 FIRETEX FX9500

Section Factor up to m <sup>-1</sup>	Hollow Section Columns 45 Minutes										
	Thickness (mm) Required for a Design Temperature of										
	350°C	400°C	450°C	500°C	520°C	550°C	575°C	600°C	650°C	700°C	750°C
40	1.369	0.994	0.605	0.446	0.446	0.446	0.446	0.446	0.446	0.446	0.446
45	1.534	1.057	0.668	0.520	0.451	0.446	0.446	0.446	0.446	0.446	0.446
50	1.652	1.119	0.731	0.579	0.508	0.446	0.446	0.446	0.446	0.446	0.446
55	1.771	1.181	0.794	0.638	0.566	0.446	0.446	0.446	0.446	0.446	0.446
60	1.889	1.243	0.857	0.696	0.623	0.494	0.446	0.446	0.446	0.446	0.446
65	2.008	1.305	0.920	0.755	0.681	0.550	0.446	0.446	0.446	0.446	0.446
70	2.127	1.368	0.983	0.814	0.738	0.606	0.471	0.446	0.446	0.446	0.446
75	2.245	1.430	1.046	0.873	0.796	0.662	0.526	0.446	0.446	0.446	0.446
80	2.364	1.492	1.110	0.931	0.853	0.718	0.582	0.446	0.446	0.446	0.446
85	2.483	1.554	1.173	0.990	0.910	0.774	0.637	0.446	0.446	0.446	0.446
90	2.601	1.616	1.236	1.049	0.968	0.830	0.693	0.494	0.446	0.446	0.446
95	2.720	1.678	1.299	1.107	1.025	0.887	0.748	0.549	0.446	0.446	0.446
100	2.838	1.741	1.362	1.166	1.083	0.943	0.804	0.605	0.446	0.446	0.446
105	2.957	1.803	1.425	1.225	1.140	0.999	0.859	0.661	0.446	0.446	0.446
110	3.076	1.865	1.488	1.284	1.198	1.055	0.914	0.717	0.446	0.446	0.446
115	3.180	1.927	1.551	1.342	1.255	1.111	0.970	0.772	0.446	0.446	0.446
120	3.257	1.989	1.614	1.401	1.312	1.167	1.025	0.828	0.446	0.446	0.446
125	3.335	2.052	1.678	1.460	1.370	1.223	1.081	0.884	0.446	0.446	0.446
130	3.412	2.114	1.741	1.518	1.427	1.279	1.136	0.940	0.446	0.446	0.446
135	3.490	2.176	1.804	1.577	1.485	1.335	1.192	0.995	0.446	0.446	0.446
140	3.567	2.238	1.867	1.636	1.542	1.391	1.247	1.051	0.446	0.446	0.446
145	3.644	2.300	1.930	1.695	1.600	1.447	1.303	1.107	0.446	0.446	0.446
150	3.722	2.362	1.993	1.753	1.657	1.503	1.358	1.163	0.446	0.446	0.446
155	3.799	2.425	2.056	1.812	1.714	1.559	1.413	1.219	0.446	0.446	0.446
160	3.877	2.487	2.119	1.871	1.772	1.615	1.469	1.274	0.509	0.446	0.446
165	3.954	2.549	2.182	1.929	1.829	1.671	1.524	1.330	0.572	0.446	0.446
170	4.032	2.611	2.245	1.988	1.887	1.728	1.580	1.386	0.636	0.446	0.446
175	4.109	2.673	2.309	2.047	1.944	1.784	1.635	1.442	0.699	0.446	0.446
180	4.187	2.736	2.372	2.106	2.002	1.840	1.691	1.497	0.762	0.446	0.446
185	4.264	2.798	2.435	2.164	2.059	1.896	1.746	1.553	0.826	0.453	0.446
190	4.342	2.860	2.498	2.223	2.116	1.952	1.801	1.609	0.889	0.510	0.446
195	4.419	2.922	2.561	2.282	2.174	2.008	1.857	1.665	0.953	0.567	0.446
200	4.497	2.984	2.624	2.340	2.231	2.064	1.912	1.720	1.016	0.624	0.446
205	4.574	3.047	2.687	2.399	2.289	2.120	1.968	1.776	1.079	0.680	0.446
210	4.652	3.109	2.750	2.458	2.346	2.176	2.023	1.832	1.143	0.737	0.446
215	4.729	3.188	2.813	2.517	2.404	2.232	2.079	1.888	1.206	0.794	0.451
220	4.807	3.308	2.877	2.575	2.461	2.288	2.134	1.943	1.270	0.851	0.496
225	4.884	3.428	2.940	2.634	2.518	2.344	2.190	1.999	1.333	0.907	0.542
230	4.961	3.548	3.003	2.693	2.576	2.400	2.245	2.055	1.396	0.964	0.587
235	5.039	3.668	3.066	2.752	2.633	2.456	2.300	2.111	1.460	1.021	0.632
240	5.116	3.788	3.129	2.810	2.691	2.512	2.356	2.167	1.523	1.078	0.678
245	5.194	3.908	3.229	2.869	2.748	2.569	2.411	2.222	1.586	1.135	0.723
250	5.271	4.028	3.351	2.928	2.806	2.625	2.467	2.278	1.650	1.191	0.768
255	5.349	4.148	3.473	2.986	2.863	2.681	2.522	2.334	1.713	1.248	0.813
260	5.426	4.268	3.595	3.045	2.920	2.737	2.578	2.390	1.777	1.305	0.859
265	5.504	4.388	3.716	3.104	2.978	2.793	2.633	2.445	1.840	1.362	0.904
270	5.581	4.508	3.838	3.173	3.035	2.849	2.688	2.501	1.903	1.418	0.949
275	5.659	4.628	3.960	3.233	3.093	2.905	2.744	2.557	1.967	1.475	0.995
280	5.749	4.748	4.082	3.413	3.150	2.961	2.799	2.613	2.030	1.532	1.040
285	5.839	4.868	4.203	3.533	3.267	3.017	2.855	2.668	2.093	1.589	1.085
290	5.929	4.988	4.325	3.653	3.385	3.073	2.910	2.724	2.157	1.646	1.130
295	6.019	5.107	4.447	3.773	3.504	3.129	2.966	2.780	2.220	1.702	1.176
300	6.109	5.227	4.568	3.893	3.622	3.220	3.021	2.836	2.284	1.759	1.221
305	6.199	5.347	4.690	4.013	3.741	3.335	3.077	2.892	2.347	1.816	1.266
310	6.288	5.467	4.812	4.133	3.859	3.449	3.132	2.947	2.410	1.873	1.312
315	6.378	5.587	4.934	4.253	3.978	3.564	3.222	3.003	2.474	1.929	1.357
320	6.468	5.700	5.055	4.373	4.096	3.679	3.332	3.059	2.537	1.986	1.402
325	6.558	5.802	5.177	4.493	4.215	3.793	3.442	3.115	2.600	2.043	1.447
330	6.648	5.905	5.299	4.613	4.333	3.908	3.551	3.187	2.664	2.100	1.493

Thickness is intumescent only. Results apply to circular and square/rectangular hollow columns. Results also apply to square/rectangular beams exposed on all four sides limited to a maximum protection thickness of 8.608 mm.



## CERTIFICATE No CF 5441 SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

Table 22 FIRETEX FX9500

Hollow Section Columns 60 Minutes											
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of										
	350°C	400°C	450°C	500°C	520°C	550°C	575°C	600°C	650°C	700°C	750°C
40	2.143	1.609	1.237	0.936	0.868	0.632	0.578	0.446	0.446	0.446	0.446
45	2.391	1.803	1.377	1.052	0.936	0.702	0.659	0.582	0.446	0.446	0.446
50	2.603	1.973	1.517	1.168	1.005	0.772	0.740	0.658	0.484	0.446	0.446
55	2.815	2.144	1.657	1.283	1.073	0.842	0.821	0.735	0.552	0.446	0.446
60	3.028	2.314	1.798	1.399	1.141	0.912	0.902	0.811	0.620	0.446	0.446
65	3.205	2.484	1.938	1.515	1.210	0.983	0.983	0.888	0.688	0.446	0.446
70	3.334	2.655	2.078	1.630	1.278	1.064	1.064	0.964	0.756	0.505	0.446
75	3.463	2.825	2.218	1.746	1.346	1.145	1.145	1.041	0.825	0.566	0.446
80	3.591	2.995	2.358	1.862	1.415	1.226	1.226	1.117	0.893	0.627	0.446
85	3.720	3.161	2.498	1.977	1.483	1.307	1.307	1.193	0.961	0.688	0.446
90	3.849	3.277	2.639	2.093	1.551	1.388	1.388	1.270	1.029	0.749	0.446
95	3.977	3.392	2.779	2.209	1.620	1.469	1.469	1.346	1.097	0.810	0.446
100	4.106	3.508	2.919	2.324	1.688	1.550	1.550	1.423	1.165	0.871	0.475
105	4.235	3.624	3.059	2.440	1.756	1.631	1.631	1.499	1.233	0.932	0.532
110	4.363	3.739	3.189	2.556	1.825	1.712	1.712	1.576	1.302	0.993	0.588
115	4.492	3.855	3.297	2.671	1.893	1.794	1.794	1.652	1.370	1.054	0.644
120	4.621	3.970	3.406	2.787	1.961	1.875	1.875	1.729	1.438	1.115	0.701
125	4.749	4.086	3.515	2.903	2.030	1.956	1.956	1.805	1.506	1.176	0.757
130	4.878	4.201	3.624	3.018	2.098	2.037	2.037	1.882	1.574	1.236	0.814
135	5.007	4.317	3.732	3.134	2.166	2.118	2.118	1.958	1.642	1.297	0.870
140	5.135	4.432	3.841	3.240	2.235	2.199	2.199	2.035	1.710	1.358	0.926
145	5.264	4.548	3.950	3.344	2.303	2.280	2.280	2.111	1.778	1.419	0.983
150	5.393	4.664	4.059	3.448	2.371	2.361	2.361	2.187	1.847	1.480	1.039
155	5.521	4.779	4.168	3.552	2.442	2.442	2.442	2.264	1.915	1.541	1.095
160	5.650	4.895	4.276	3.656	2.523	2.523	2.523	2.340	1.983	1.602	1.152
165	5.743	5.010	4.385	3.760	2.604	2.604	2.604	2.417	2.051	1.663	1.208
170	5.835	5.126	4.494	3.864	2.685	2.685	2.685	2.493	2.119	1.724	1.264
175	5.926	5.241	4.603	3.969	2.766	2.766	2.766	2.570	2.187	1.785	1.321
180	6.017	5.357	4.711	4.073	2.847	2.847	2.847	2.646	2.255	1.846	1.377
185	6.108	5.472	4.820	4.177	2.928	2.928	2.928	2.723	2.324	1.907	1.434
190	6.200	5.588	4.929	4.281	3.009	3.009	3.009	2.799	2.392	1.968	1.490
195	6.291	5.693	5.038	4.385	3.090	3.090	3.090	2.876	2.460	2.029	1.546
200	6.382	5.781	5.146	4.489	3.179	3.179	3.179	2.952	2.528	2.090	1.603
205	6.473	5.869	5.255	4.593	3.291	3.291	3.291	3.028	2.596	2.151	1.659
210	6.564	5.957	5.364	4.697	3.404	3.404	3.404	3.105	2.664	2.212	1.715
215	6.656	6.045	5.473	4.801	3.517	3.517	3.517	3.196	2.732	2.273	1.772
220	6.747	6.133	5.582	4.905	3.665	3.630	3.630	3.309	2.800	2.334	1.828
225	6.838	6.221	5.687	5.010	3.864	3.743	3.743	3.422	2.869	2.394	1.884
230	6.929	6.309	5.785	5.114	4.063	3.855	3.855	3.535	2.937	2.455	1.941
235	7.020	6.397	5.884	5.218	4.262	3.968	3.968	3.649	3.005	2.516	1.997
240	7.112	6.485	5.982	5.322	4.461	4.081	4.081	3.762	3.073	2.577	2.054
245	7.203	6.573	6.080	5.426	4.660	4.194	4.194	3.875	3.141	2.638	2.110
250	7.294	6.661	6.178	5.530	4.859	4.307	4.307	3.988	3.248	2.699	2.166
255	7.385	6.749	6.277	5.634	5.058	4.419	4.419	4.102	3.361	2.760	2.223
260	7.477	6.837	6.375	5.746	5.257	4.532	4.532	4.215	3.475	2.821	2.279
265	7.568	6.925	6.473	5.861	5.456	4.695	4.645	4.328	3.589	2.882	2.335
270	7.659	7.013	6.571	5.975	5.655	4.868	4.758	4.441	3.702	2.943	2.392
275	7.750	7.101	6.670	6.089	5.779	5.040	4.871	4.555	3.816	3.004	2.448
280	7.938	7.189	6.768	6.203	5.903	5.213	4.984	4.668	3.930	3.065	2.504
285	8.170	7.277	6.866	6.318	6.026	5.386	5.096	4.781	4.044	3.126	2.561
290	8.402	7.365	6.964	6.432	6.149	5.558	5.209	4.895	4.157	3.211	2.617
295	8.634	7.453	7.063	6.546	6.272	5.717	5.322	5.008	4.271	3.316	2.674
300	8.866	7.541	7.161	6.661	6.396	5.858	5.435	5.121	4.385	3.420	2.730
305	9.098	7.629	7.259	6.775	6.519	5.999	5.548	5.234	4.499	3.524	2.786
310	9.330	7.717	7.357	6.889	6.642	6.140	5.661	5.348	4.612	3.628	2.843
315	9.562	7.873	7.456	7.004	6.765	6.280	5.815	5.461	4.726	3.732	2.899
320	9.794	8.186	7.554	7.118	6.889	6.421	5.968	5.574	4.840	3.836	2.955
325	10.026	8.499	7.652	7.232	7.012	6.562	6.121	5.699	4.954	3.940	3.012
330	10.258	8.812	7.750	7.347	7.135	6.702	6.274	5.855	5.067	4.044	3.068

Thickness is intumescent only. Results apply to circular and square/rectangular hollow columns. Results also apply to square/rectangular beams exposed on all four sides limited to a maximum protection thickness of 8.608 mm.





## CERTIFICATE No CF 5441 SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 23 FIRETEX FX9500**

Hollow Section Columns 75 Minutes											
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of										
	350°C	400°C	450°C	500°C	520°C	550°C	575°C	600°C	650°C	700°C	750°C
40	2.896	2.275	1.815	1.466	1.350	1.194	1.103	0.989	0.687	0.587	0.446
45	3.254	2.538	2.032	1.647	1.518	1.345	1.219	1.092	0.778	0.667	0.534
50	3.612	2.789	2.243	1.827	1.688	1.500	1.336	1.196	0.869	0.747	0.605
55	3.970	3.039	2.454	2.007	1.858	1.654	1.452	1.299	0.960	0.827	0.676
60	4.329	3.284	2.666	2.187	2.028	1.809	1.569	1.403	1.051	0.908	0.747
65	4.687	3.523	2.877	2.368	2.198	1.964	1.685	1.507	1.142	0.988	0.818
70	5.045	3.763	3.088	2.548	2.368	2.119	1.802	1.610	1.233	1.068	0.889
75	5.403	4.003	3.268	2.728	2.537	2.274	1.918	1.714	1.324	1.148	0.961
80	5.693	4.243	3.435	2.908	2.707	2.428	2.035	1.818	1.415	1.228	1.032
85	5.813	4.483	3.601	3.089	2.877	2.583	2.151	1.921	1.506	1.308	1.103
90	5.934	4.723	3.767	3.242	3.047	2.738	2.268	2.025	1.597	1.388	1.174
95	6.055	4.963	3.934	3.380	3.203	2.893	2.384	2.129	1.688	1.468	1.245
100	6.175	5.203	4.100	3.518	3.338	3.047	2.500	2.232	1.779	1.548	1.317
105	6.296	5.443	4.266	3.656	3.472	3.194	2.617	2.336	1.870	1.629	1.388
110	6.416	5.670	4.433	3.795	3.606	3.322	2.733	2.439	1.961	1.709	1.459
115	6.537	5.790	4.599	3.933	3.740	3.450	2.850	2.543	2.052	1.789	1.530
120	6.658	5.909	4.765	4.071	3.875	3.579	2.966	2.647	2.143	1.869	1.601
125	6.778	6.028	4.932	4.210	4.009	3.707	3.083	2.750	2.234	1.949	1.672
130	6.899	6.147	5.098	4.348	4.143	3.835	3.211	2.854	2.325	2.029	1.744
135	7.019	6.267	5.264	4.486	4.277	3.964	3.356	2.958	2.416	2.109	1.815
140	7.140	6.386	5.431	4.624	4.412	4.092	3.502	3.061	2.507	2.189	1.886
145	7.261	6.505	5.597	4.763	4.546	4.220	3.647	3.170	2.598	2.269	1.957
150	7.381	6.625	5.741	4.901	4.680	4.349	3.792	3.319	2.689	2.350	2.028
155	7.502	6.744	5.873	5.039	4.815	4.477	3.938	3.468	2.780	2.430	2.100
160	7.622	6.863	6.004	5.177	4.949	4.606	4.083	3.617	2.871	2.510	2.171
165	7.743	6.983	6.135	5.316	5.083	4.734	4.228	3.765	2.962	2.590	2.242
170	7.888	7.102	6.267	5.454	5.217	4.862	4.374	3.914	3.053	2.670	2.313
175	8.044	7.221	6.398	5.592	5.352	4.991	4.519	4.063	3.144	2.750	2.384
180	8.199	7.340	6.530	5.716	5.486	5.119	4.664	4.212	3.284	2.830	2.455
185	8.355	7.460	6.661	5.828	5.620	5.247	4.810	4.361	3.430	2.910	2.527
190	8.510	7.579	6.792	5.939	5.740	5.376	4.955	4.509	3.575	2.990	2.598
195	8.665	7.698	6.924	6.050	5.854	5.504	5.100	4.658	3.721	3.071	2.669
200	8.821	7.835	7.055	6.162	5.968	5.632	5.246	4.807	3.866	3.151	2.740
205	8.976	8.007	7.187	6.273	6.082	5.754	5.391	4.956	4.012	3.263	2.811
210	9.132	8.180	7.318	6.384	6.196	5.873	5.536	5.105	4.157	3.376	2.883
215	9.287	8.352	7.449	6.495	6.310	5.993	5.679	5.253	4.303	3.489	2.954
220	9.443	8.525	7.581	6.607	6.424	6.113	5.805	5.402	4.448	3.601	3.025
225	9.598	8.698	7.712	6.718	6.538	6.232	5.932	5.551	4.594	3.714	3.096
230	9.754	8.870	7.875	6.829	6.652	6.352	6.059	5.696	4.740	3.827	3.175
235	9.909	9.043	8.072	6.941	6.766	6.471	6.185	5.832	4.885	3.940	3.284
240	10.065	9.215	8.268	7.052	6.880	6.591	6.312	5.969	5.031	4.053	3.393
245	10.220	9.388	8.465	7.163	6.994	6.711	6.438	6.105	5.176	4.165	3.502
250	10.376	9.560	8.661	7.274	7.109	6.830	6.565	6.241	5.322	4.278	3.611
255	10.531	9.733	8.858	7.386	7.223	6.950	6.692	6.377	5.467	4.391	3.720
260	10.687	9.905	9.054	7.497	7.337	7.069	6.818	6.514	5.613	4.504	3.828
265	10.842	10.078	9.250	7.608	7.451	7.189	6.945	6.650	5.771	4.616	3.937
270	10.998	10.250	9.447	7.720	7.565	7.309	7.072	6.786	5.935	4.729	4.046
275	11.153	10.423	9.643	7.933	7.679	7.428	7.198	6.922	6.099	4.842	4.155
280	11.309	10.595	9.840	8.264	7.819	7.548	7.325	7.058	6.263	4.955	4.264
285	11.464	10.768	10.036	8.595	8.152	7.667	7.451	7.195	6.427	5.068	4.373
290	-	10.940	10.232	8.926	8.484	7.801	7.578	7.331	6.591	5.180	4.481
295	-	11.113	10.429	9.257	8.816	8.130	7.705	7.467	6.755	5.293	4.590
300	-	11.285	10.625	9.588	9.149	8.459	7.909	7.603	6.919	5.406	4.699
305	-	11.458	10.822	9.919	9.481	8.788	8.224	7.740	7.083	5.519	4.808
310	-	11.630	11.018	10.250	9.814	9.117	8.539	7.990	7.247	5.632	4.917
315	-	-	11.215	10.581	10.146	9.446	8.854	8.286	7.411	5.850	5.026
320	-	-	11.411	10.912	10.478	9.775	9.169	8.583	7.575	6.100	5.134
325	-	-	11.607	11.243	10.811	10.104	9.484	8.879	7.739	6.350	5.243
330	-	-	-	11.574	11.143	10.433	9.799	9.176	7.977	6.601	5.352

Thickness is intumescent only. Results apply to circular and square/rectangular hollow columns. Results also apply to square/rectangular beams exposed on all four sides limited to a maximum protection thickness of 8.608 mm.





# CERTIFICATE No CF 5441

## SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 24 FIRETEX FX9500**

Hollow Section Columns 90 Minutes											
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of										
	350°C	400°C	450°C	500°C	520°C	550°C	575°C	600°C	650°C	700°C	750°C
40	4.366	2.841	2.404	1.999	1.867	1.692	1.569	1.448	1.268	1.105	0.922
45	4.909	3.316	2.680	2.236	2.090	1.897	1.759	1.624	1.401	1.208	1.009
50	5.442	3.790	2.962	2.480	2.322	2.112	1.935	1.786	1.534	1.311	1.096
55	5.843	4.264	3.266	2.725	2.554	2.327	2.110	1.948	1.667	1.415	1.184
60	6.154	4.738	3.617	2.969	2.786	2.542	2.285	2.109	1.801	1.518	1.271
65	6.465	5.212	3.968	3.218	3.018	2.756	2.460	2.271	1.934	1.621	1.358
70	6.775	5.670	4.319	3.480	3.250	2.971	2.635	2.432	2.067	1.724	1.446
75	7.086	5.878	4.670	3.743	3.482	3.182	2.810	2.594	2.200	1.828	1.533
80	7.397	6.086	5.021	4.005	3.714	3.371	2.986	2.755	2.333	1.931	1.620
85	7.708	6.294	5.372	4.267	3.946	3.560	3.160	2.917	2.467	2.034	1.708
90	7.873	6.502	5.684	4.530	4.178	3.749	3.327	3.078	2.600	2.137	1.795
95	7.995	6.710	5.826	4.792	4.410	3.938	3.493	3.237	2.733	2.241	1.883
100	8.117	6.918	5.968	5.055	4.642	4.127	3.660	3.393	2.866	2.344	1.970
105	8.238	7.126	6.110	5.317	4.874	4.315	3.826	3.549	2.999	2.447	2.057
110	8.360	7.334	6.252	5.579	5.106	4.504	3.993	3.706	3.133	2.551	2.145
115	8.482	7.542	6.395	5.726	5.339	4.693	4.159	3.862	3.280	2.654	2.232
120	8.604	7.750	6.537	5.873	5.571	4.882	4.326	4.018	3.429	2.757	2.319
125	8.726	7.899	6.679	5.920	5.721	5.071	4.492	4.174	3.578	2.860	2.407
130	8.847	8.038	6.821	6.018	5.822	5.260	4.659	4.331	3.728	2.964	2.494
135	8.969	8.178	6.963	6.115	5.922	5.449	4.825	4.487	3.877	3.067	2.581
140	9.091	8.317	7.105	6.212	6.023	5.638	4.992	4.643	4.026	3.178	2.669
145	9.213	8.456	7.247	6.309	6.124	5.756	5.158	4.800	4.176	3.324	2.756
150	9.335	8.596	7.389	6.406	6.224	5.866	5.325	4.956	4.325	3.471	2.844
155	9.456	8.735	7.531	6.504	6.325	5.976	5.491	5.112	4.474	3.618	2.931
160	9.578	8.874	7.673	6.601	6.426	6.086	5.658	5.268	4.624	3.764	3.018
165	9.700	9.014	7.827	6.698	6.527	6.196	5.782	5.425	4.773	3.911	3.106
170	9.822	9.153	8.014	6.795	6.627	6.305	5.906	5.581	4.922	4.057	3.217
175	9.944	9.292	8.201	6.892	6.728	6.415	6.030	5.724	5.072	4.204	3.355
180	10.066	9.432	8.388	6.990	6.829	6.525	6.154	5.855	5.221	4.351	3.494
185	10.187	9.571	8.575	7.087	6.930	6.635	6.278	5.985	5.370	4.497	3.632
190	10.309	9.710	8.762	7.184	7.030	6.745	6.402	6.116	5.520	4.644	3.771
195	10.431	9.850	8.949	7.281	7.131	6.854	6.527	6.246	5.668	4.791	3.909
200	10.553	9.989	9.136	7.378	7.232	6.964	6.651	6.377	5.809	4.937	4.047
205	10.675	10.128	9.323	7.476	7.333	7.074	6.775	6.508	5.949	5.084	4.186
210	10.796	10.268	9.509	7.573	7.433	7.184	6.899	6.638	6.090	5.230	4.324
215	10.918	10.407	9.696	7.670	7.534	7.294	7.023	6.769	6.230	5.377	4.463
220	11.040	10.546	9.883	7.767	7.635	7.403	7.147	6.899	6.371	5.524	4.601
225	11.162	10.686	10.070	7.864	7.736	7.513	7.271	7.030	6.511	5.672	4.739
230	-	10.825	10.257	8.541	8.010	7.623	7.395	7.161	6.652	5.838	4.878
235	-	10.964	10.444	8.946	8.417	7.733	7.519	7.291	6.792	6.003	5.016
240	-	11.104	10.631	9.352	8.824	8.015	7.643	7.422	6.933	6.169	5.155
245	-	11.243	10.818	9.757	9.231	8.422	7.768	7.552	7.074	6.334	5.293
250	-	-	11.005	10.162	9.638	8.828	8.142	7.683	7.214	6.500	5.431
255	-	-	11.192	10.568	10.045	9.235	8.542	7.881	7.355	6.666	5.570
260	-	-	11.379	10.973	10.451	9.642	8.942	8.267	7.495	6.831	5.740
265	-	-	-	11.379	10.858	10.049	9.342	8.653	7.636	6.997	5.967
270	-	-	-	-	11.265	10.456	9.742	9.039	7.776	7.163	6.194
275	-	-	-	-	-	10.863	10.142	9.425	8.122	7.328	6.421
280	-	-	-	-	-	11.270	10.542	9.812	8.472	7.494	6.647
285	-	-	-	-	-	-	10.942	10.198	8.823	7.660	6.874
290	-	-	-	-	-	-	11.342	10.584	9.173	7.864	7.101
295	-	-	-	-	-	-	-	10.970	9.523	8.169	7.328
300	-	-	-	-	-	-	-	11.356	9.873	8.474	7.555
305	-	-	-	-	-	-	-	-	10.223	8.779	7.781
310	-	-	-	-	-	-	-	-	10.574	9.084	7.993
315	-	-	-	-	-	-	-	-	10.924	9.389	8.205
320	-	-	-	-	-	-	-	-	11.274	9.694	8.416
325	-	-	-	-	-	-	-	-	11.624	9.999	8.628
330	-	-	-	-	-	-	-	-	-	10.304	8.840

Thickness is intumescent only. Results apply to circular and square/rectangular hollow columns. Results also apply to square/rectangular beams exposed on all four sides limited to a maximum protection thickness of 8.608 mm.



**CERTIFICATE No CF 5441  
SHERWIN-WILLIAMS PROTECTIVE &  
MARINE COATINGS**

**Table 25 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	Hollow Section Columns 105 Minutes										
	Thickness (mm) Required for a Design Temperature of										
	350°C	400°C	450°C	500°C	520°C	550°C	575°C	600°C	650°C	700°C	750°C
40	5.749	4.332	2.850	2.533	2.383	2.189	2.054	1.925	1.715	1.539	1.367
45	6.330	4.881	3.437	2.821	2.658	2.445	2.295	2.153	1.920	1.725	1.533
50	6.911	5.516	4.024	3.129	2.951	2.720	2.529	2.372	2.110	1.884	1.674
55	7.493	5.979	4.610	3.576	3.284	2.994	2.762	2.591	2.299	2.044	1.815
60	7.913	6.392	5.197	4.035	3.699	3.302	2.996	2.810	2.489	2.203	1.955
65	8.178	6.805	5.724	4.494	4.115	3.657	3.258	3.029	2.679	2.363	2.096
70	8.443	7.219	6.031	4.952	4.531	4.011	3.580	3.273	2.869	2.522	2.237
75	8.708	7.632	6.339	5.411	4.947	4.366	3.901	3.550	3.058	2.682	2.378
80	8.973	7.872	6.647	5.802	5.362	4.721	4.222	3.827	3.250	2.842	2.518
85	9.239	8.015	6.954	6.113	5.736	5.075	4.544	4.104	3.444	3.001	2.659
90	9.504	8.159	7.262	6.424	6.005	5.430	4.865	4.381	3.638	3.160	2.800
95	9.769	8.303	7.569	6.735	6.274	5.702	5.187	4.658	3.832	3.309	2.940
100	10.034	8.446	7.824	7.046	6.543	5.826	5.508	4.935	4.026	3.458	3.081
105	10.299	8.590	7.966	7.357	6.812	5.949	5.711	5.212	4.220	3.607	3.218
110	10.564	8.734	8.108	7.668	7.081	6.073	5.811	5.489	4.414	3.756	3.352
115	10.829	8.877	8.250	7.869	7.350	6.197	5.911	5.698	4.608	3.905	3.485
120	11.094	9.021	8.392	8.008	7.619	6.320	6.010	5.800	4.802	4.054	3.619
125	11.359	9.165	8.534	8.148	7.839	6.444	6.110	5.903	4.996	4.203	3.752
130	-	9.308	8.676	8.287	7.986	6.568	6.210	6.006	5.190	4.352	3.886
135	-	9.452	8.818	8.427	8.133	6.691	6.309	6.108	5.384	4.501	4.019
140	-	9.596	8.960	8.566	8.281	6.815	6.409	6.211	5.578	4.649	4.153
145	-	9.739	9.102	8.706	8.428	6.938	6.509	6.313	5.727	4.798	4.286
150	-	9.883	9.244	8.845	8.575	7.062	6.609	6.416	5.845	4.947	4.420
155	-	10.027	9.386	8.984	8.723	7.186	6.708	6.518	5.964	5.096	4.553
160	-	10.170	9.528	9.124	8.870	7.309	6.808	6.621	6.082	5.245	4.686
165	-	10.314	9.670	9.263	9.017	7.433	6.908	6.723	6.200	5.394	4.820
170	-	10.458	9.812	9.403	9.165	7.557	7.007	6.826	6.318	5.543	4.953
175	-	10.601	9.954	9.542	9.312	7.680	7.107	6.928	6.436	5.690	5.087
180	-	10.745	10.096	9.682	9.459	7.837	7.207	7.031	6.554	5.833	5.220
185	-	10.888	10.238	9.821	9.607	8.125	7.306	7.133	6.672	5.975	5.354
190	-	11.032	10.380	9.961	9.754	8.413	7.406	7.236	6.790	6.117	5.487
195	-	11.176	10.521	10.100	9.902	8.701	7.506	7.338	6.908	6.259	5.621
200	-	-	10.663	10.240	10.049	8.989	7.605	7.441	7.026	6.401	5.755
205	-	-	10.805	10.379	10.196	9.278	7.705	7.544	7.144	6.543	5.936
210	-	-	10.947	10.519	10.344	9.566	7.913	7.646	7.262	6.686	6.098
215	-	-	11.089	10.658	10.491	9.854	8.431	7.749	7.381	6.828	6.259
220	-	-	11.231	10.798	10.638	10.142	8.948	8.138	7.499	6.970	6.421
225	-	-	-	10.937	10.786	10.430	9.465	8.649	7.617	7.112	6.583
230	-	-	-	11.077	10.933	10.718	9.983	9.159	7.735	7.254	6.744
235	-	-	-	11.216	11.080	11.006	10.500	9.670	8.079	7.396	6.906
240	-	-	-	-	11.228	11.294	11.018	10.181	8.558	7.538	7.067
245	-	-	-	-	-	-	11.535	10.691	9.037	7.681	7.229
250	-	-	-	-	-	-	-	-	9.516	7.911	7.390
255	-	-	-	-	-	-	-	-	9.995	8.339	7.552
260	-	-	-	-	-	-	-	-	10.474	8.767	7.714
265	-	-	-	-	-	-	-	-	10.953	9.196	7.958
270	-	-	-	-	-	-	-	-	11.432	9.624	8.259
275	-	-	-	-	-	-	-	-	-	10.052	8.560
280	-	-	-	-	-	-	-	-	-	10.481	8.861
285	-	-	-	-	-	-	-	-	-	10.909	9.161
290	-	-	-	-	-	-	-	-	-	11.338	9.462
295	-	-	-	-	-	-	-	-	-	-	9.763
300	-	-	-	-	-	-	-	-	-	-	10.064
305	-	-	-	-	-	-	-	-	-	-	10.365
310	-	-	-	-	-	-	-	-	-	-	10.666
315	-	-	-	-	-	-	-	-	-	-	10.966
320	-	-	-	-	-	-	-	-	-	-	11.267
325	-	-	-	-	-	-	-	-	-	-	-
330	-	-	-	-	-	-	-	-	-	-	-

Thickness is intumescent only. Results apply to circular and square/rectangular hollow columns. Results also apply to square/rectangular beams exposed on all four sides limited to a maximum protection thickness of 8.608 mm.

## CERTIFICATE No CF 5441 SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 26 FIRETEX FX9500**

Hollow Section Columns 120 Minutes											
Section Factor up to m <sup>-1</sup>	Thickness (mm) Required for a Design Temperature of										
	350°C	400°C	450°C	500°C	520°C	550°C	575°C	600°C	650°C	700°C	750°C
40	7.480	5.575	4.383	2.922	2.837	2.687	2.539	2.402	2.182	2.003	1.837
45	7.946	6.252	4.950	3.620	3.276	2.989	2.827	2.677	2.435	2.238	2.055
50	8.413	6.928	5.673	4.317	3.917	3.439	3.118	2.953	2.681	2.453	2.252
55	8.879	7.604	6.197	5.014	4.559	4.001	3.602	3.279	2.927	2.669	2.449
60	9.346	8.038	6.720	5.697	5.200	4.563	4.110	3.734	3.182	2.884	2.647
65	9.812	8.387	7.243	6.208	5.790	5.125	4.619	4.188	3.534	3.099	2.844
70	10.279	8.735	7.767	6.718	6.252	5.678	5.128	4.643	3.887	3.348	3.042
75	10.746	9.084	8.021	7.228	6.714	6.061	5.636	5.097	4.239	3.607	3.227
80	11.212	9.433	8.269	7.739	7.176	6.445	5.961	5.552	4.592	3.867	3.396
85	-	9.782	8.517	7.911	7.638	6.828	6.277	5.851	4.944	4.126	3.566
90	-	10.131	8.765	8.055	7.878	7.211	6.594	6.103	5.296	4.385	3.735
95	-	10.479	9.013	8.198	8.020	7.594	6.910	6.355	5.649	4.645	3.904
100	-	10.828	9.260	8.341	8.162	7.854	7.226	6.607	5.754	4.904	4.074
105	-	11.177	9.508	8.485	8.304	7.997	7.543	6.858	5.852	5.163	4.243
110	-	11.526	9.756	8.628	8.446	8.141	7.817	7.110	5.950	5.423	4.412
115	-	-	10.004	8.772	8.588	8.285	7.967	7.362	6.048	5.668	4.582
120	-	-	10.252	8.915	8.731	8.429	8.117	7.614	6.146	5.770	4.751
125	-	-	10.500	9.059	8.873	8.573	8.267	7.835	6.245	5.872	4.921
130	-	-	10.748	9.202	9.015	8.717	8.417	7.998	6.343	5.975	5.090
135	-	-	10.995	9.345	9.157	8.860	8.567	8.161	6.441	6.077	5.259
140	-	-	11.243	9.489	9.299	9.004	8.717	8.323	6.539	6.179	5.429
145	-	-	-	9.632	9.441	9.148	8.867	8.486	6.637	6.282	5.598
150	-	-	-	9.776	9.583	9.292	9.017	8.649	6.736	6.384	5.740
155	-	-	-	9.919	9.725	9.436	9.167	8.811	6.834	6.487	5.868
160	-	-	-	10.063	9.868	9.579	9.317	8.974	6.932	6.589	5.996
165	-	-	-	10.206	10.010	9.723	9.467	9.137	7.030	6.691	6.123
170	-	-	-	10.350	10.152	9.867	9.617	9.300	7.128	6.794	6.251
175	-	-	-	10.493	10.294	10.011	9.767	9.462	7.227	6.896	6.378
180	-	-	-	10.636	10.436	10.155	9.917	9.625	7.325	6.998	6.506
185	-	-	-	10.780	10.578	10.299	10.067	9.788	7.423	7.101	6.633
190	-	-	-	10.923	10.720	10.442	10.217	9.951	7.521	7.203	6.761
195	-	-	-	11.067	10.862	10.586	10.368	10.113	7.619	7.306	6.889
200	-	-	-	-	11.005	10.730	10.518	10.276	7.718	7.408	7.016
205	-	-	-	-	11.147	10.874	10.668	10.439	8.015	7.510	7.144
210	-	-	-	-	-	11.018	10.818	10.602	8.645	7.613	7.271
215	-	-	-	-	-	11.161	10.968	10.764	9.274	7.715	7.399
220	-	-	-	-	-	11.305	11.118	10.927	9.904	7.993	7.527
225	-	-	-	-	-	-	11.268	11.090	10.534	8.563	7.654
230	-	-	-	-	-	-	-	11.252	11.163	9.133	7.788
235	-	-	-	-	-	-	-	11.415	-	9.702	8.228
240	-	-	-	-	-	-	-	-	-	10.272	8.668
245	-	-	-	-	-	-	-	-	-	10.842	9.107
250	-	-	-	-	-	-	-	-	-	-	9.547
255	-	-	-	-	-	-	-	-	-	-	9.987
260	-	-	-	-	-	-	-	-	-	-	10.426
265	-	-	-	-	-	-	-	-	-	-	10.866
270	-	-	-	-	-	-	-	-	-	-	11.305
275	-	-	-	-	-	-	-	-	-	-	-
280	-	-	-	-	-	-	-	-	-	-	-
285	-	-	-	-	-	-	-	-	-	-	-
290	-	-	-	-	-	-	-	-	-	-	-
295	-	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-	-
305	-	-	-	-	-	-	-	-	-	-	-
310	-	-	-	-	-	-	-	-	-	-	-
315	-	-	-	-	-	-	-	-	-	-	-
320	-	-	-	-	-	-	-	-	-	-	-
325	-	-	-	-	-	-	-	-	-	-	-
330	-	-	-	-	-	-	-	-	-	-	-

Thickness is intumescent only. Results apply to circular and square/rectangular hollow columns. Results also apply to square/rectangular beams exposed on all four sides limited to a maximum protection thickness of 8.608 mm.





**CERTIFICATE No CF 5441**  
**SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS**

**Table 27 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	Square/Rectangular Hollow Section Beams 15 minutes									
	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
65	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
70	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
75	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
80	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
85	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
90	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
95	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
100	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
105	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
110	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
115	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
120	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
125	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
130	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
135	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
140	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
145	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
150	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
155	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
160	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
165	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
170	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
175	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
180	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892

Thickness is intumescent only. Results apply to square/rectangular hollow beams with concrete slabs with 3 sided fire exposure.



**CERTIFICATE No CF 5441**  
**SHERWIN-WILLIAMS PROTECTIVE &**  
**MARINE COATINGS**

**Table 28 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	Square/Rectangular Hollow Section Beams 30 minutes									
	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
65	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
70	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
75	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
80	0.955	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
85	1.102	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
90	1.249	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
95	1.396	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
100	1.543	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
105	1.689	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
110	1.836	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
115	1.983	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
120	2.130	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
125	2.277	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
130	2.424	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
135	2.571	1.022	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
140	2.718	1.227	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
145	2.865	1.431	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
150	3.012	1.636	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
155	3.174	1.840	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
160	3.359	2.045	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
165	3.544	2.249	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
170	3.730	2.454	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
175	3.915	2.658	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
180	4.100	2.863	0.977	0.892	0.892	0.892	0.892	0.892	0.892	0.892

Thickness is intumescent only. Results apply to square/rectangular hollow beams with concrete slabs with 3 sided fire exposure.

## CERTIFICATE No CF 5441 SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 29 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	Square/Rectangular Hollow Section Beams 45 minutes									
	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
65	1.823	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
70	2.082	1.054	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
75	2.364	1.293	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
80	2.647	1.533	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.892
85	2.930	1.773	0.908	0.892	0.892	0.892	0.892	0.892	0.892	0.892
90	3.197	2.013	1.131	0.892	0.892	0.892	0.892	0.892	0.892	0.892
95	3.440	2.253	1.354	0.892	0.892	0.892	0.892	0.892	0.892	0.892
100	3.683	2.493	1.577	1.009	0.892	0.892	0.892	0.892	0.892	0.892
105	3.926	2.733	1.800	1.267	0.892	0.892	0.892	0.892	0.892	0.892
110	4.169	2.973	2.023	1.525	0.892	0.892	0.892	0.892	0.892	0.892
115	4.412	3.230	2.246	1.783	0.892	0.892	0.892	0.892	0.892	0.892
120	4.655	3.508	2.469	2.041	0.892	0.892	0.892	0.892	0.892	0.892
125	4.898	3.785	2.692	2.300	0.892	0.892	0.892	0.892	0.892	0.892
130	5.141	4.063	2.916	2.558	1.060	0.892	0.892	0.892	0.892	0.892
135	5.384	4.340	3.154	2.816	1.503	0.892	0.892	0.892	0.892	0.892
140	5.627	4.618	3.465	3.074	1.946	0.892	0.892	0.892	0.892	0.892
145	5.870	4.895	3.775	3.359	2.389	0.892	0.892	0.892	0.892	0.892
150	6.113	5.173	4.086	3.646	2.833	0.892	0.892	0.892	0.892	0.892
155	6.356	5.450	4.397	3.934	3.213	0.892	0.892	0.892	0.892	0.892
160	6.599	5.728	4.708	4.221	3.500	0.892	0.892	0.892	0.892	0.892
165	6.842	6.005	5.019	4.509	3.786	0.892	0.892	0.892	0.892	0.892
170	7.085	6.283	5.329	4.796	4.072	1.106	0.892	0.892	0.892	0.892
175	7.328	6.560	5.640	5.084	4.358	1.531	0.892	0.892	0.892	0.892
180	7.571	6.838	5.951	5.371	4.644	1.955	1.216	0.892	0.892	0.892

Thickness is intumescent only. Results apply to square/rectangular hollow beams with concrete slabs with 3 sided fire exposure.



## CERTIFICATE No CF 5441 SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 30 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	Square/Rectangular Hollow Section Beams 60 minutes									
	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
65	3.108	2.009	1.386	1.019	0.892	0.892	0.892	0.892	0.892	0.892
70	3.260	2.299	1.605	1.338	0.892	0.892	0.892	0.892	0.892	0.892
75	3.412	2.636	1.929	1.656	0.960	0.892	0.892	0.892	0.892	0.892
80	3.563	2.973	2.254	1.975	1.300	0.892	0.892	0.892	0.892	0.892
85	3.715	3.325	2.579	2.293	1.640	0.892	0.892	0.892	0.892	0.892
90	3.866	3.687	2.903	2.611	1.980	1.186	0.892	0.892	0.892	0.892
95	4.049	4.049	3.248	2.930	2.319	1.553	1.249	0.892	0.892	0.892
100	4.411	4.411	3.624	3.265	2.659	1.921	1.621	1.227	0.892	0.892
105	4.773	4.773	3.999	3.620	2.999	2.288	1.994	1.592	0.892	0.892
110	5.135	5.135	4.375	3.974	3.352	2.655	2.366	1.956	1.073	0.892
115	5.497	5.497	4.751	4.329	3.710	3.022	2.739	2.320	1.460	0.936
120	5.859	5.859	5.127	4.684	4.068	3.388	3.111	2.685	1.847	1.248
125	6.221	6.221	5.503	5.039	4.427	3.754	3.477	3.049	2.233	1.561
130	6.582	6.582	5.878	5.393	4.785	4.119	3.844	3.412	2.620	1.873
135	7.097	6.944	6.254	5.748	5.143	4.485	4.210	3.775	3.007	2.185
140	-	7.306	6.630	6.103	5.501	4.850	4.576	4.137	3.363	2.498
145	-	7.668	7.006	6.457	5.860	5.216	4.943	4.500	3.708	2.810
150	-	8.030	7.382	6.812	6.218	5.581	5.309	4.863	4.053	3.122
155	-	8.392	7.757	7.167	6.576	5.947	5.675	5.225	4.399	3.435
160	-	-	-	7.521	6.935	6.312	6.041	5.588	4.744	3.747
165	-	-	-	7.876	7.293	6.678	6.408	5.951	5.090	4.060
170	-	-	-	8.231	7.651	7.043	6.774	6.313	5.435	4.372
175	-	-	-	-	8.010	7.409	7.140	6.676	5.781	4.684
180	-	-	-	-	8.368	7.774	7.507	7.039	6.126	4.997

Thickness is intumescent only. Results apply to square/rectangular hollow beams with concrete slabs with 3 sided fire exposure.





## CERTIFICATE No CF 5441 SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS

**Table 31 FIRETEX FX9500**

Section Factor up to m <sup>-1</sup>	Square/Rectangular Hollow Section Beams 75 minutes									
	Thickness (mm) Required for a Design Temperature of									
	350°C	400°C	450°C	500°C	550°C	600°C	620°C	650°C	700°C	750°C
65	4.370	3.119	2.435	2.148	1.684	1.257	1.048	0.912	0.892	0.892
70	4.561	3.624	2.787	2.470	1.952	1.618	1.417	1.108	0.892	0.892
75	4.752	4.128	3.217	2.884	2.352	1.980	1.785	1.487	1.077	0.892
80	4.943	4.633	3.714	3.318	2.752	2.342	2.154	1.866	1.448	0.892
85	5.236	5.138	4.210	3.772	3.160	2.703	2.522	2.244	1.820	1.051
90	6.286	5.643	4.707	4.226	3.618	3.065	2.891	2.623	2.192	1.471
95	7.336	6.148	5.204	4.680	4.077	3.518	3.300	3.002	2.563	1.890
100	-	6.653	5.700	5.134	4.535	3.982	3.763	3.439	2.935	2.310
105	-	7.158	6.197	5.588	4.993	4.445	4.226	3.896	3.343	2.729
110	-	7.662	6.693	6.042	5.451	4.908	4.689	4.353	3.780	3.147
115	-	8.167	7.190	6.496	5.910	5.371	5.152	4.810	4.218	3.551
120	-	-	7.687	6.949	6.368	5.834	5.616	5.267	4.655	3.956
125	-	-	8.183	7.403	6.826	6.297	6.079	5.724	5.092	4.360
130	-	-	-	7.857	7.285	6.760	6.542	6.181	5.529	4.764
135	-	-	-	-	7.743	7.223	7.005	6.638	5.966	5.168
140	-	-	-	-	-	7.686	7.468	7.095	6.403	5.573
145	-	-	-	-	-	8.149	7.931	7.552	6.841	5.977
150	-	-	-	-	-	-	-	8.009	7.278	6.381
155	-	-	-	-	-	-	-	-	7.715	6.785
160	-	-	-	-	-	-	-	-	-	7.190
165	-	-	-	-	-	-	-	-	-	7.594
170	-	-	-	-	-	-	-	-	-	7.998
175	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-

Thickness is intumescent only. Results apply to square/rectangular hollow beams with concrete slabs with 3 sided fire exposure.

