

## Southwest Fireproofing Type 5 GP, 5 MD, 7 GP and 7 HD

Design No. D788 - Protected Deck Floor Assembly

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**Normal Weight Concrete**

Minimum Thickness, in., Required on Beam

Member	W/D	Unrestrained Beam Rating				
		1 Hr	1.5 Hr	2 Hr	3 Hr	4 Hr
W4x13	0.65	0.490	0.700	0.910	1.400	2.170
W5x16	0.65	0.490	0.700	0.910	1.400	2.170
W5x19	0.76	0.450	0.643	0.836	1.287	1.994
W6x9	0.39	0.619	0.884	1.149	1.768	2.740
W6x12	0.51	0.552	0.788	1.025	1.577	2.444
W6x16	0.66	0.486	0.694	0.903	1.389	2.153
W6x20	0.67	0.482	0.689	0.896	1.378	2.136
W6x26	0.82	0.431	0.616	0.801	1.232	1.910
W8x10	0.37	0.631	0.902	1.173	1.804	2.796
W8x13	0.47	0.572	0.818	1.063	1.636	2.535
W8x15	0.54	0.537	0.768	0.998	1.535	2.379
W8x18	0.57	0.524	0.748	0.972	1.496	2.318
W8x21	0.66	0.486	0.694	0.903	1.389	2.153
W8x24	0.69	0.475	0.678	0.882	1.357	2.103
W8x28	0.80	0.438	0.625	0.813	1.250	1.938
W8x31	0.79	0.441	0.629	0.818	1.259	1.951
W8x35	0.88	0.414	0.591	0.769	1.182	1.833
W8x40	1.00	0.383	0.547	0.711	1.094	1.695
W8x48	1.18	0.375	0.492	0.639	0.983	1.524
W8x58	1.41	0.375	0.435	0.566	0.871	1.350
W8x67	1.61	0.375	0.396	0.515	0.792	1.227
W10x12	0.38	0.625	0.893	1.161	1.786	2.768
W10x15	0.48	0.567	0.810	1.053	1.620	2.512
W10x17	0.54	0.537	0.768	0.998	1.535	2.379
W10x19	0.59	0.515	0.735	0.956	1.471	2.279
W10x22	0.59	0.515	0.735	0.956	1.471	2.279
W10x26	0.69	0.475	0.678	0.882	1.357	2.103
W10x30	0.79	0.441	0.629	0.818	1.259	1.951
W10x33	0.77	0.447	0.639	0.830	1.277	1.980
W10x39	0.90	0.408	0.583	0.758	1.167	1.808
W10x46	1.03	0.376	0.537	0.698	1.074	1.664
W10x49	0.99	0.385	0.550	0.715	1.101	1.706
W10x54	1.09	0.375	0.518	0.673	1.036	1.605
W10x60	1.20	0.375	0.486	0.632	0.972	1.507
W10x68	1.36	0.375	0.446	0.580	0.893	1.384
W10x77	1.52	0.375	0.413	0.537	0.825	1.279
W10x88	1.72	0.375	0.377	0.490	0.754	1.169
W10x100	1.93	0.375	0.375	0.450	0.692	1.072
W10x112	2.14	0.375	0.375	0.415	0.639	0.990
W12x14	0.40	0.613	0.875	1.138	1.750	2.713
W12x16	0.45	0.583	0.833	1.083	1.667	2.583
W12x19	0.53	0.542	0.774	1.007	1.549	2.400
W12x22	0.61	0.506	0.723	0.940	1.446	2.242
W12x26	0.60	0.510	0.729	0.948	1.458	2.260

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		1 Hr	1.5 Hr	2 Hr	3 Hr	4 Hr
W12x30	0.69	0.475	0.678	0.882	1.357	2.103
W12x35	0.79	0.441	0.629	0.818	1.259	1.951
W12x40	0.85	0.422	0.603	0.784	1.207	1.871
W12x45	0.95	0.395	0.565	0.734	1.129	1.750
W12x50	1.04	0.375	0.534	0.694	1.067	1.654
W12x53	0.99	0.385	0.550	0.715	1.101	1.706
W12x54	1.04	0.375	0.534	0.694	1.067	1.654
W12x58	1.08	0.375	0.521	0.677	1.042	1.615
W12x65	1.09	0.375	0.518	0.673	1.036	1.605
W12x72	1.20	0.375	0.486	0.632	0.972	1.507
W12x79	1.32	0.375	0.456	0.592	0.911	1.413
W12x87	1.44	0.375	0.429	0.558	0.858	1.330
W12x96	1.57	0.375	0.403	0.524	0.806	1.250
W12x106	1.73	0.375	0.376	0.488	0.751	1.164
W12x120	1.94	0.375	0.375	0.448	0.689	1.068
W12x136	2.17	0.375	0.375	0.411	0.632	0.979
W12x152	2.40	0.375	0.375	0.379	0.583	0.904
W12x170	2.66	0.375	0.375	0.375	0.537	0.832
W12x190	2.93	0.375	0.375	0.375	0.496	0.768
W12x210	3.21	0.375	0.375	0.375	0.459	0.712
W12x230	3.47	0.375	0.375	0.375	0.430	0.666
W12x262	3.76	0.375	0.375	0.375	0.401	0.622
W12x279	4.10	0.375	0.375	0.375	0.375	0.577
W12x305	4.41	0.375	0.375	0.375	0.375	0.541
W12x336	4.78	0.375	0.375	0.375	0.375	0.504
W14x22	0.52	0.547	0.781	1.016	1.563	2.422
W14x26	0.61	0.506	0.723	0.940	1.446	2.242
W14x30	0.63	0.498	0.711	0.925	1.423	2.205
W14x34	0.71	0.468	0.668	0.868	1.336	2.071
W14x38	0.79	0.441	0.629	0.818	1.259	1.951
W14x43	0.85	0.422	0.603	0.784	1.207	1.871
W14x48	0.94	0.398	0.568	0.739	1.136	1.761
W14x53	1.03	0.376	0.537	0.698	1.074	1.664
W14x61	1.07	0.375	0.524	0.681	1.048	1.624
W14x68	1.19	0.375	0.489	0.635	0.978	1.515
W14x74	1.28	0.375	0.465	0.605	0.931	1.443
W14x82	1.41	0.375	0.435	0.566	0.871	1.350
W14x90	1.27	0.375	0.468	0.608	0.936	1.451
W14x99	1.39	0.375	0.440	0.572	0.879	1.363
W14x109	1.53	0.375	0.411	0.534	0.822	1.273
W14x120	1.67	0.375	0.385	0.501	0.771	1.195
W14x132	1.83	0.375	0.375	0.468	0.720	1.116
W14x145	1.94	0.375	0.375	0.448	0.689	1.068
W14x159	2.11	0.375	0.375	0.420	0.646	1.001

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		1 Hr	1.5 Hr	2 Hr	3 Hr	4 Hr
W14x176	2.25	0.375	0.375	0.399	0.614	0.952
W14x193	2.32	0.375	0.375	0.390	0.599	0.929
W14x211	2.74	0.375	0.375	0.375	0.524	0.812
W14x233	3.00	0.375	0.375	0.375	0.486	0.753
W14x257	3.27	0.375	0.375	0.375	0.452	0.701
W14x283	3.57	0.375	0.375	0.375	0.420	0.650
W14x311	3.88	0.375	0.375	0.375	0.391	0.605
W14x342	4.21	0.375	0.375	0.375	0.375	0.564
W14x370	4.51	0.375	0.375	0.375	0.375	0.531
W14x398	4.80	0.375	0.375	0.375	0.375	0.502
W14x426	5.09	0.375	0.375	0.375	0.375	0.477
W14x455	5.38	0.375	0.375	0.375	0.375	0.454
W14x500	5.82	0.375	0.375	0.375	0.375	0.423
W14x550	6.30	0.375	0.375	0.375	0.375	0.393
W14x605	6.80	0.375	0.375	0.375	0.375	0.375
W16x26	0.55	0.533	0.761	0.989	1.522	2.359
W16x31	0.65	0.490	0.700	0.910	1.400	2.170
W16x36	0.69	0.475	0.678	0.882	1.357	2.103
W16x40	0.76	0.450	0.643	0.836	1.287	1.994
W16x45	0.85	0.422	0.603	0.784	1.207	1.871
W16x50	0.94	0.398	0.568	0.739	1.136	1.761
W16x67	1.07	0.375	0.524	0.681	1.048	1.624
W16x77	1.07	0.375	0.524	0.681	1.048	1.624
W16x89	1.22	0.375	0.481	0.625	0.962	1.490
W16x100	1.56	0.375	0.405	0.527	0.810	1.256
W18x35	0.66	0.486	0.694	0.903	1.389	2.153
W18x40	0.76	0.450	0.643	0.836	1.287	1.994
W18x46	0.86	0.420	0.599	0.779	1.199	1.858
W18x50	0.87	0.417	0.595	0.774	1.190	1.845
W18x55	0.95	0.395	0.565	0.734	1.129	1.750
W18x60	1.03	0.376	0.537	0.698	1.074	1.664
W18x65	1.11	0.375	0.512	0.665	1.023	1.586
W18x71	1.21	0.375	0.483	0.628	0.967	1.499
W18x76	1.11	0.375	0.512	0.665	1.023	1.586
W18x88	1.24	0.375	0.476	0.618	0.951	1.474
W18x97	1.39	0.375	0.440	0.572	0.879	1.363
W18x106	1.52	0.375	0.413	0.537	0.825	1.279
W18x119	1.68	0.375	0.384	0.499	0.768	1.190
W21x44	0.73	0.461	0.658	0.855	1.316	2.039
W21x50	0.83	0.428	0.612	0.795	1.224	1.897
W21x57	0.93	0.400	0.572	0.743	1.144	1.773
W21x62	0.94	0.398	0.568	0.739	1.136	1.761
W21x68	1.03	0.376	0.537	0.698	1.074	1.664
W21x83	1.24	0.375	0.476	0.618	0.951	1.474

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Member	W/D	Unrestrained Beam Rating				
		1 Hr	1.5 Hr	2 Hr	3 Hr	4 Hr
W21x93	1.38	0.375	0.442	0.574	0.884	1.370
W21x101	1.29	0.375	0.463	0.602	0.926	1.435
W21x111	1.41	0.375	0.435	0.566	0.871	1.350
W21x122	1.54	0.375	0.409	0.532	0.818	1.268
W21x132	1.66	0.375	0.387	0.503	0.774	1.200
W21x147	1.83	0.375	0.375	0.468	0.720	1.116
W24x55	0.82	0.431	0.616	0.801	1.232	1.910
W24x62	0.92	0.403	0.576	0.748	1.151	1.785
W24x68	0.93	0.400	0.572	0.743	1.144	1.773
W24x76	1.02	0.378	0.540	0.702	1.080	1.674
W24x84	1.13	0.375	0.506	0.658	1.012	1.568
W24x94	1.26	0.375	0.470	0.612	0.941	1.458
W24x104	1.22	0.375	0.481	0.625	0.962	1.490
W24x117	1.36	0.375	0.446	0.580	0.893	1.384
W24x131	1.52	0.375	0.413	0.537	0.825	1.279
W24x146	1.68	0.375	0.384	0.499	0.768	1.190
W24x162	1.85	0.375	0.375	0.464	0.714	1.107
W27x84	1.02	0.378	0.540	0.702	1.080	1.674
W27x94	1.13	0.375	0.506	0.658	1.012	1.568
W27x102	1.23	0.375	0.478	0.622	0.956	1.482
W27x114	1.36	0.375	0.446	0.580	0.893	1.384
W27x146	1.53	0.375	0.411	0.534	0.822	1.273
W27x161	1.68	0.375	0.384	0.499	0.768	1.190
W27x178	1.85	0.375	0.375	0.464	0.714	1.107
W30x99	1.10	0.375	0.515	0.669	1.029	1.596
W30x108	1.20	0.375	0.486	0.632	0.972	1.507
W30x116	1.28	0.375	0.465	0.605	0.931	1.443
W30x124	1.37	0.375	0.444	0.577	0.888	1.377
W30x132	1.46	0.375	0.425	0.552	0.850	1.317
W30x173	1.66	0.375	0.387	0.503	0.774	1.200
W30x191	1.82	0.375	0.375	0.470	0.723	1.121
W30x211	2.00	0.375	0.375	0.438	0.673	1.043
W33x118	1.19	0.375	0.489	0.635	0.978	1.515
W33x130	1.31	0.375	0.458	0.596	0.916	1.420
W33x141	1.41	0.375	0.435	0.566	0.871	1.350
W33x152	1.51	0.375	0.415	0.539	0.829	1.286
W33x201	1.78	0.375	0.375	0.478	0.735	1.140

These beam protection thicknesses have been calculated for the convenience of users, in accordance with "6. Adjustment of Thickness of Spray-applied Fire Resistive Materials for Restrained and Unrestrained Beams", as detailed in the UL FireResistance Directory - Volume 1, 2007, page 9. While we have taken care to be as accurate as possible, we will not be held responsible for errors or omissions. If any discrepancy is found between these tables and the UL Design information, the UL Design information shall govern.