CERTIFICATE OF APPROVAL
No CF 5290

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

HEMPEL PAINTS (EMIRATES) LLC

Post Box 2000, Sharjah, UAE
Tel: +971 6 5310140

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

CERTIFIED PRODUCT	TECHNICAL SCHEDULE
Hempacore ONE 43600 and Hempacore ONE FD 43601	**TS15 Intumescent Coatings for Steelwork**

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

Paul Duggan
Certification Manager

Issued: 23rd December 2014
Reissued: 16th January 2020
Valid to: 15th October 2024

CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

1. This approval relates to the use of Hempacore ONE 43600 and Hempacore ONE FD 43601 for the fire protection of I-shaped and hollow steel sections. The precise scope is given in Tables 1 to 29 which show the total dry film thickness of Hempacore ONE 43600 and Hempacore ONE FD 43601 (excluding primer and top sealer) required to provide fire resistance periods in accordance with BS476: Part 21: 1987. The scope includes periods of fire resistance of up to 120 minutes for I-sections and up to 105 minutes for rectangular hollow columns and up to 90 minutes for circular hollow columns.

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$2^1/_2$ or equivalent and primed with a suitable and compatible primer. Specifications of surface preparations, primers and top sealers is available from Hempel Paints (Emirates) LLC whose responsibility is to ensure that Hempacore ONE 43600 (and Hempacore ONE FD 43601) is compatible for use in respect of both ambient and fire conditions. The total dry film thickness of primer should not exceed the tested thickness.

6. The data shown is applicable to Hempacore ONE 43600 (and Hempacore ONE FD 43601) applied by spray 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 are based on assessments which comply with the criteria for acceptability now incorporated within the CERTIFIRE scheme.

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Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 1 Hempacore ONE 43600 and FD 43601 I-Columns 15 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
70	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
75	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
80	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
85	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
90	0.202	0.192	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
95	0.214	0.197	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
100	0.227	0.203	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
105	0.239	0.209	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
110	0.252	0.214	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
115	0.264	0.220	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
120	0.277	0.226	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
125	0.289	0.231	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
130	0.301	0.237	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
135	0.314	0.243	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
140	0.326	0.249	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
145	0.339	0.254	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
150	0.351	0.260	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
155	0.363	0.266	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
160	0.376	0.271	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
165	0.388	0.277	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
170	0.401	0.283	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
175	0.413	0.288	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
180	0.426	0.294	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
185	0.440	0.300	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
190	0.455	0.306	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
195	0.469	0.311	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
200	0.484	0.317	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
205	0.498	0.323	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
210	0.513	0.328	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
215	0.527	0.334	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
220	0.542	0.340	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
225	0.556	0.345	0.194	0.191	0.191	0.191	0.191	0.191	0.191	0.191
230	0.571	0.351	0.201	0.191	0.191	0.191	0.191	0.191	0.191	0.191
235	0.585	0.357	0.208	0.191	0.191	0.191	0.191	0.191	0.191	0.191
240	0.600	0.362	0.216	0.191	0.191	0.191	0.191	0.191	0.191	0.191
245	0.614	0.368	0.223	0.191	0.191	0.191	0.191	0.191	0.191	0.191
250	0.629	0.374	0.230	0.191	0.191	0.191	0.191	0.191	0.191	0.191
255	0.643	0.380	0.237	0.191	0.191	0.191	0.191	0.191	0.191	0.191
260	0.658	0.385	0.245	0.191	0.191	0.191	0.191	0.191	0.191	0.191
265	0.672	0.391	0.252	0.191	0.191	0.191	0.191	0.191	0.191	0.191
270	0.686	0.397	0.259	0.191	0.191	0.191	0.191	0.191	0.191	0.191
275	0.701	0.402	0.267	0.191	0.191	0.191	0.191	0.191	0.191	0.191
280	0.715	0.408	0.274	0.194	0.191	0.191	0.191	0.191	0.191	0.191
285	0.730	0.414	0.281	0.199	0.191	0.191	0.191	0.191	0.191	0.191
290	0.744	0.419	0.288	0.205	0.191	0.191	0.191	0.191	0.191	0.191
295	0.759	0.428	0.296	0.211	0.191	0.191	0.191	0.191	0.191	0.191
300	0.773	0.442	0.303	0.217	0.191	0.191	0.191	0.191	0.191	0.191
305	0.788	0.455	0.310	0.222	0.191	0.191	0.191	0.191	0.191	0.191
310	0.802	0.469	0.317	0.228	0.191	0.191	0.191	0.191	0.191	0.191
315	0.817	0.482	0.325	0.234	0.191	0.191	0.191	0.191	0.191	0.191
320	0.831	0.495	0.332	0.240	0.191	0.191	0.191	0.191	0.191	0.191
325	0.846	0.509	0.339	0.245	0.191	0.191	0.191	0.191	0.191	0.191
330	0.860	0.522	0.347	0.251	0.191	0.191	0.191	0.191	0.191	0.191
335	0.875	0.536	0.354	0.257	0.191	0.191	0.191	0.191	0.191	0.191
340	0.889	0.549	0.361	0.263	0.191	0.191	0.191	0.191	0.191	0.191

Thickness is intumescent only. Results also apply to I-section beams exposed on all four sides limited to a maximum protection thickness of 4.253mm.

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Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 2 Hempacore ONE 43600 and FD 43601 I-Columns 30 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
70	0.367	0.203	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
75	0.406	0.208	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
80	0.442	0.238	0.192	0.191	0.191	0.191	0.191	0.191	0.191	0.191
85	0.472	0.268	0.209	0.191	0.191	0.191	0.191	0.191	0.191	0.191
90	0.502	0.298	0.226	0.202	0.196	0.191	0.191	0.191	0.191	0.191
95	0.532	0.327	0.243	0.213	0.203	0.192	0.191	0.191	0.191	0.191
100	0.563	0.357	0.259	0.224	0.210	0.197	0.191	0.191	0.191	0.191
105	0.593	0.387	0.276	0.235	0.217	0.203	0.191	0.191	0.191	0.191
110	0.623	0.417	0.293	0.246	0.224	0.209	0.197	0.191	0.191	0.191
115	0.653	0.440	0.310	0.257	0.231	0.215	0.203	0.191	0.191	0.191
120	0.683	0.461	0.327	0.268	0.238	0.221	0.208	0.191	0.191	0.191
125	0.713	0.483	0.343	0.279	0.245	0.226	0.214	0.196	0.191	0.191
130	0.743	0.505	0.360	0.290	0.252	0.232	0.220	0.201	0.191	0.191
135	0.773	0.526	0.377	0.301	0.259	0.238	0.225	0.207	0.191	0.191
140	0.804	0.548	0.394	0.312	0.266	0.244	0.231	0.212	0.191	0.191
145	0.834	0.569	0.411	0.323	0.273	0.249	0.237	0.217	0.191	0.191
150	0.864	0.591	0.429	0.334	0.280	0.255	0.242	0.223	0.191	0.191
155	0.894	0.612	0.450	0.345	0.287	0.261	0.248	0.228	0.191	0.191
160	0.924	0.634	0.472	0.356	0.294	0.267	0.254	0.234	0.191	0.191
165	0.954	0.655	0.494	0.367	0.301	0.273	0.259	0.239	0.191	0.191
170	0.984	0.677	0.515	0.378	0.308	0.278	0.265	0.245	0.191	0.191
175	1.015	0.698	0.537	0.389	0.315	0.284	0.271	0.250	0.191	0.191
180	1.045	0.720	0.559	0.400	0.322	0.290	0.276	0.256	0.192	0.191
185	1.075	0.741	0.580	0.411	0.329	0.296	0.282	0.261	0.198	0.191
190	1.105	0.763	0.602	0.422	0.336	0.301	0.288	0.267	0.203	0.191
195	1.140	0.784	0.624	0.442	0.343	0.307	0.293	0.272	0.208	0.191
200	1.196	0.806	0.645	0.463	0.350	0.313	0.299	0.278	0.213	0.191
205	1.252	0.828	0.667	0.483	0.357	0.319	0.305	0.283	0.218	0.191
210	1.308	0.849	0.689	0.504	0.364	0.325	0.310	0.289	0.224	0.191
215	1.365	0.871	0.710	0.524	0.371	0.330	0.316	0.294	0.229	0.191
220	1.421	0.892	0.732	0.545	0.378	0.336	0.322	0.300	0.234	0.191
225	1.477	0.914	0.754	0.566	0.385	0.342	0.328	0.305	0.239	0.191
230	1.533	0.935	0.775	0.586	0.392	0.348	0.333	0.311	0.245	0.191
235	1.589	0.957	0.797	0.607	0.399	0.353	0.339	0.316	0.250	0.191
240	1.646	0.978	0.819	0.628	0.406	0.359	0.345	0.322	0.255	0.191
245	1.702	1.000	0.840	0.648	0.413	0.365	0.350	0.327	0.260	0.191
250	1.758	1.021	0.862	0.669	0.420	0.371	0.356	0.333	0.266	0.191
255	1.814	1.043	0.883	0.690	0.437	0.377	0.362	0.338	0.271	0.195
260	1.871	1.064	0.905	0.710	0.458	0.382	0.367	0.343	0.276	0.198
265	1.927	1.086	0.927	0.731	0.479	0.388	0.373	0.349	0.281	0.202
270	1.983	1.108	0.948	0.751	0.501	0.394	0.379	0.354	0.286	0.206
275	2.039	1.129	0.970	0.772	0.522	0.400	0.384	0.360	0.292	0.210
280	2.096	1.169	0.992	0.793	0.543	0.405	0.390	0.365	0.297	0.213
285	2.152	1.209	1.013	0.813	0.565	0.411	0.396	0.371	0.302	0.217
290	2.208	1.249	1.035	0.834	0.586	0.417	0.401	0.376	0.307	0.221
295	2.264	1.290	1.057	0.855	0.607	0.423	0.407	0.382	0.313	0.224
300	2.321	1.330	1.078	0.875	0.628	0.441	0.413	0.387	0.318	0.228
305	2.377	1.370	1.100	0.896	0.650	0.459	0.418	0.393	0.323	0.232
310	2.433	1.411	1.122	0.917	0.671	0.477	0.426	0.398	0.328	0.235
315	2.488	1.451	1.148	0.937	0.692	0.495	0.443	0.404	0.334	0.239
320	2.541	1.492	1.176	0.958	0.714	0.514	0.460	0.409	0.339	0.243
325	2.595	1.532	1.205	0.978	0.735	0.532	0.477	0.415	0.344	0.246
330	2.648	1.572	1.234	0.999	0.756	0.550	0.495	0.420	0.349	0.250
335	2.702	1.613	1.262	1.020	0.778	0.569	0.512	0.431	0.354	0.254
340	2.755	1.653	1.291	1.040	0.799	0.587	0.529	0.446	0.360	0.258

Thickness is intumescent only. Results also apply to I-section beams exposed on all four sides limited to a maximum protection thickness of 4.253mm.

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Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 3 Hempacore ONE 43600 and FD 43601 I-Columns 45 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
70	0.883	0.439	0.310	0.203	0.191	0.191	0.191	0.191	0.191	0.191
75	0.949	0.479	0.335	0.230	0.197	0.191	0.191	0.191	0.191	0.191
80	1.015	0.519	0.372	0.262	0.219	0.196	0.192	0.191	0.191	0.191
85	1.081	0.559	0.409	0.294	0.242	0.213	0.208	0.202	0.195	0.191
90	1.144	0.599	0.439	0.325	0.265	0.230	0.224	0.216	0.205	0.197
95	1.198	0.639	0.465	0.357	0.287	0.247	0.239	0.230	0.215	0.203
100	1.252	0.679	0.490	0.389	0.310	0.263	0.255	0.244	0.225	0.210
105	1.307	0.719	0.516	0.420	0.333	0.280	0.271	0.258	0.235	0.216
110	1.361	0.759	0.541	0.444	0.355	0.297	0.286	0.272	0.245	0.222
115	1.415	0.799	0.567	0.468	0.378	0.314	0.302	0.286	0.255	0.228
120	1.469	0.839	0.593	0.492	0.401	0.331	0.317	0.300	0.265	0.235
125	1.523	0.880	0.618	0.515	0.424	0.348	0.333	0.314	0.274	0.241
130	1.577	0.920	0.644	0.539	0.447	0.365	0.349	0.328	0.284	0.247
135	1.631	0.960	0.669	0.562	0.470	0.382	0.364	0.342	0.294	0.254
140	1.686	1.000	0.695	0.586	0.493	0.399	0.380	0.356	0.304	0.260
145	1.740	1.040	0.720	0.610	0.516	0.415	0.396	0.370	0.314	0.266
150	1.794	1.080	0.746	0.633	0.539	0.436	0.411	0.384	0.324	0.272
155	1.848	1.120	0.772	0.657	0.562	0.459	0.429	0.398	0.334	0.279
160	1.902	1.168	0.797	0.680	0.585	0.482	0.451	0.412	0.344	0.285
165	1.956	1.218	0.823	0.704	0.608	0.504	0.473	0.427	0.354	0.291
170	2.010	1.268	0.848	0.727	0.631	0.527	0.495	0.449	0.364	0.297
175	2.065	1.319	0.874	0.751	0.655	0.550	0.518	0.470	0.374	0.304
180	2.119	1.369	0.899	0.775	0.678	0.573	0.540	0.491	0.384	0.310
185	2.173	1.419	0.925	0.798	0.701	0.596	0.562	0.512	0.394	0.316
190	2.227	1.470	0.951	0.822	0.724	0.619	0.584	0.533	0.404	0.322
195	2.281	1.520	0.976	0.845	0.747	0.642	0.606	0.555	0.414	0.329
200	2.335	1.570	1.002	0.869	0.770	0.665	0.629	0.576	0.424	0.335
205	2.389	1.621	1.027	0.892	0.793	0.688	0.651	0.597	0.444	0.341
210	2.444	1.671	1.053	0.916	0.816	0.711	0.673	0.618	0.464	0.347
215	2.524	1.721	1.078	0.940	0.839	0.734	0.695	0.640	0.484	0.354
220	2.614	1.772	1.104	0.963	0.862	0.757	0.717	0.661	0.504	0.360
225	2.704	1.822	1.130	0.987	0.885	0.780	0.740	0.682	0.524	0.366
230	2.794	1.872	1.181	1.010	0.909	0.803	0.762	0.703	0.544	0.373
235	2.884	1.922	1.232	1.034	0.932	0.826	0.784	0.724	0.564	0.379
240	2.974	1.973	1.284	1.057	0.955	0.849	0.806	0.746	0.584	0.385
245	3.064	2.023	1.335	1.081	0.978	0.872	0.829	0.767	0.604	0.391
250	3.154	2.073	1.387	1.105	1.001	0.895	0.851	0.788	0.624	0.398
255	3.244	2.124	1.439	1.128	1.024	0.918	0.873	0.809	0.644	0.404
260	3.334	2.174	1.490	1.169	1.047	0.941	0.895	0.831	0.664	0.410
265	3.424	2.224	1.542	1.211	1.070	0.964	0.917	0.852	0.684	0.416
270	3.515	2.275	1.594	1.254	1.093	0.987	0.940	0.873	0.704	0.423
275	3.605	2.325	1.645	1.296	1.116	1.009	0.962	0.894	0.724	0.441
280	3.695	2.375	1.697	1.339	1.145	1.032	0.984	0.916	0.744	0.460
285	3.785	2.426	1.748	1.381	1.180	1.055	1.006	0.937	0.764	0.479
290	3.885	2.486	1.800	1.423	1.216	1.078	1.028	0.958	0.784	0.498
295	4.165	2.567	1.852	1.466	1.251	1.101	1.051	0.979	0.804	0.517
300	4.444	2.647	1.903	1.508	1.287	1.124	1.073	1.000	0.824	0.536
305	4.723	2.727	1.955	1.550	1.323	1.153	1.095	1.022	0.844	0.555
310	5.002	2.808	2.006	1.593	1.358	1.183	1.117	1.043	0.864	0.574
315	-	2.888	2.058	1.635	1.394	1.214	1.143	1.064	0.884	0.593
320	-	2.969	2.110	1.677	1.429	1.245	1.173	1.085	0.904	0.612
325	-	3.049	2.161	1.720	1.465	1.275	1.204	1.107	0.924	0.631
330	-	3.130	2.213	1.762	1.501	1.306	1.234	1.128	0.944	0.650
335	-	3.210	2.265	1.805	1.536	1.336	1.265	1.158	0.964	0.669
340	-	3.291	2.316	1.847	1.572	1.367	1.296	1.188	0.984	0.688

Thickness is intumescent only. Results also apply to I-section beams exposed on all four sides limited to a maximum protection thickness of 4.253mm.

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HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 4 Hempacore ONE 43600 and FD 43601 I-Columns 60 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
70	1.986	0.882	0.597	0.407	0.329	0.270	0.216	0.203	0.191	0.191
75	2.119	0.938	0.635	0.440	0.359	0.288	0.252	0.236	0.204	0.191
80	2.264	0.994	0.674	0.474	0.397	0.321	0.288	0.269	0.231	0.194
85	2.409	1.050	0.712	0.508	0.431	0.353	0.324	0.302	0.257	0.212
90	2.500	1.105	0.751	0.541	0.458	0.385	0.360	0.335	0.284	0.230
95	2.563	1.160	0.790	0.575	0.484	0.418	0.395	0.368	0.310	0.248
100	2.625	1.213	0.828	0.609	0.511	0.443	0.428	0.401	0.337	0.265
105	2.688	1.266	0.867	0.642	0.538	0.466	0.451	0.431	0.363	0.283
110	2.750	1.320	0.905	0.676	0.565	0.490	0.475	0.453	0.390	0.301
115	2.813	1.373	0.944	0.709	0.591	0.513	0.498	0.476	0.416	0.319
120	2.876	1.427	0.983	0.743	0.618	0.537	0.521	0.499	0.440	0.337
125	2.938	1.480	1.021	0.777	0.645	0.560	0.544	0.522	0.462	0.354
130	3.001	1.533	1.060	0.810	0.671	0.584	0.568	0.545	0.485	0.372
135	3.063	1.587	1.098	0.844	0.698	0.607	0.591	0.568	0.507	0.390
140	3.126	1.640	1.140	0.878	0.725	0.631	0.614	0.591	0.530	0.408
145	3.189	1.694	1.194	0.911	0.752	0.654	0.637	0.613	0.552	0.426
150	3.251	1.747	1.248	0.945	0.778	0.678	0.660	0.636	0.574	0.449
155	3.314	1.800	1.302	0.979	0.805	0.701	0.684	0.659	0.597	0.472
160	3.376	1.854	1.356	1.012	0.832	0.725	0.707	0.682	0.619	0.495
165	3.439	1.907	1.410	1.046	0.858	0.748	0.730	0.705	0.642	0.517
170	3.501	1.961	1.464	1.079	0.885	0.772	0.753	0.728	0.664	0.540
175	3.564	2.014	1.518	1.113	0.912	0.795	0.776	0.750	0.687	0.563
180	3.627	2.067	1.572	1.156	0.939	0.819	0.800	0.773	0.709	0.585
185	3.689	2.121	1.626	1.209	0.965	0.842	0.823	0.796	0.732	0.608
190	3.752	2.174	1.680	1.261	0.992	0.866	0.846	0.819	0.754	0.631
195	3.814	2.227	1.734	1.314	1.019	0.889	0.869	0.842	0.776	0.654
200	3.882	2.281	1.788	1.366	1.045	0.913	0.893	0.865	0.799	0.676
205	3.986	2.334	1.842	1.419	1.072	0.936	0.916	0.887	0.821	0.699
210	4.090	2.388	1.895	1.472	1.099	0.960	0.939	0.910	0.844	0.722
215	4.194	2.441	1.949	1.524	1.126	0.983	0.962	0.933	0.866	0.744
220	4.298	2.531	2.003	1.577	1.175	1.007	0.985	0.956	0.889	0.767
225	4.403	2.640	2.057	1.630	1.228	1.030	1.009	0.979	0.911	0.790
230	4.507	2.748	2.111	1.682	1.282	1.054	1.032	1.002	0.934	0.812
235	4.611	2.857	2.165	1.735	1.336	1.077	1.055	1.024	0.956	0.835
240	4.715	2.966	2.219	1.787	1.389	1.101	1.078	1.047	0.978	0.858
245	4.820	3.074	2.273	1.840	1.443	1.124	1.101	1.070	1.001	0.881
250	4.924	3.183	2.327	1.893	1.497	1.169	1.125	1.093	1.023	0.903
255	5.028	3.292	2.381	1.945	1.550	1.221	1.169	1.116	1.046	0.926
260	5.132	3.400	2.435	1.998	1.604	1.273	1.220	1.149	1.068	0.949
265	5.236	3.509	2.521	2.050	1.657	1.324	1.271	1.200	1.091	0.971
270	-	3.618	2.631	2.103	1.711	1.376	1.323	1.251	1.113	0.994
275	-	3.726	2.742	2.156	1.765	1.427	1.374	1.302	1.142	1.017
280	-	3.835	2.852	2.208	1.818	1.479	1.425	1.353	1.189	1.039
285	-	3.967	2.963	2.261	1.872	1.531	1.476	1.404	1.237	1.062
290	-	4.110	3.073	2.313	1.926	1.582	1.527	1.455	1.284	1.085
295	-	4.253	3.184	2.366	1.979	1.634	1.578	1.506	1.332	1.108
300	-	4.395	3.294	2.419	2.033	1.685	1.629	1.557	1.379	1.131
305	-	4.538	3.405	2.484	2.086	1.737	1.680	1.607	1.427	1.171
310	-	4.681	3.515	2.594	2.140	1.789	1.731	1.658	1.474	1.211
315	-	4.824	3.626	2.703	2.194	1.840	1.782	1.709	1.522	1.251
320	-	4.967	3.736	2.813	2.247	1.892	1.834	1.760	1.569	1.291
325	-	5.109	3.847	2.922	2.301	1.943	1.885	1.811	1.617	1.331
330	-	5.252	3.954	3.032	2.355	1.995	1.936	1.862	1.664	1.371
335	-	-	4.061	3.141	2.408	2.047	1.987	1.913	1.712	1.411
340	-	-	4.168	3.251	2.464	2.098	2.038	1.964	1.759	1.451

Thickness is intumescent only. Results also apply to I-section beams exposed on all four sides limited to a maximum protection thickness of 4.253mm.

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HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 5 Hempacore ONE 43600 and FD 43601 I-Columns 75 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
70	2.905	1.592	0.913	0.700	0.555	0.416	0.404	0.374	0.324	0.203
75	3.051	1.700	0.967	0.739	0.590	0.447	0.435	0.414	0.353	0.237
80	3.197	1.815	1.022	0.779	0.625	0.479	0.465	0.447	0.391	0.272
85	3.343	1.930	1.076	0.818	0.660	0.510	0.496	0.477	0.428	0.307
90	3.488	2.045	1.131	0.857	0.694	0.542	0.527	0.507	0.458	0.341
95	3.634	2.161	1.187	0.897	0.729	0.573	0.557	0.537	0.489	0.376
100	3.780	2.276	1.242	0.936	0.764	0.605	0.588	0.568	0.519	0.411
105	3.913	2.391	1.297	0.975	0.799	0.636	0.619	0.598	0.549	0.439
110	4.026	2.484	1.353	1.015	0.833	0.668	0.649	0.628	0.579	0.464
115	4.139	2.545	1.408	1.054	0.868	0.699	0.680	0.658	0.609	0.489
120	4.252	2.606	1.464	1.093	0.903	0.731	0.711	0.688	0.640	0.514
125	4.365	2.667	1.519	1.134	0.938	0.762	0.742	0.718	0.670	0.539
130	4.478	2.728	1.574	1.191	0.972	0.794	0.772	0.749	0.700	0.564
135	4.591	2.790	1.630	1.248	1.007	0.826	0.803	0.779	0.730	0.589
140	4.703	2.851	1.685	1.306	1.042	0.857	0.834	0.809	0.760	0.614
145	4.816	2.912	1.741	1.363	1.077	0.889	0.864	0.839	0.791	0.639
150	4.929	2.973	1.796	1.420	1.111	0.920	0.895	0.869	0.821	0.664
155	5.042	3.034	1.851	1.478	1.157	0.952	0.926	0.900	0.851	0.689
160	5.155	3.095	1.907	1.535	1.215	0.983	0.956	0.930	0.881	0.714
165	5.268	3.156	1.962	1.592	1.272	1.015	0.987	0.960	0.911	0.739
170	-	3.217	2.018	1.650	1.330	1.046	1.018	0.990	0.942	0.764
175	-	3.278	2.073	1.707	1.388	1.078	1.049	1.020	0.972	0.789
180	-	3.339	2.129	1.764	1.445	1.109	1.079	1.050	1.002	0.814
185	-	3.400	2.184	1.822	1.503	1.150	1.110	1.081	1.032	0.839
190	-	3.461	2.239	1.879	1.561	1.211	1.151	1.111	1.062	0.864
195	-	3.522	2.295	1.936	1.619	1.271	1.212	1.152	1.093	0.889
200	-	3.583	2.350	1.994	1.676	1.331	1.273	1.214	1.123	0.914
205	-	3.644	2.406	2.051	1.734	1.391	1.334	1.275	1.174	0.939
210	-	3.706	2.464	2.108	1.792	1.452	1.395	1.337	1.232	0.964
215	-	3.767	2.594	2.166	1.850	1.512	1.455	1.398	1.290	0.989
220	-	3.828	2.725	2.223	1.907	1.572	1.516	1.460	1.348	1.014
225	-	3.918	2.855	2.280	1.965	1.632	1.577	1.521	1.406	1.039
230	-	4.077	2.986	2.338	2.023	1.693	1.638	1.583	1.464	1.064
235	-	4.235	3.116	2.395	2.080	1.753	1.699	1.644	1.522	1.089
240	-	4.393	3.247	2.452	2.138	1.813	1.760	1.705	1.580	1.114
245	-	4.552	3.377	2.577	2.196	1.873	1.821	1.767	1.638	1.154
250	-	4.710	3.508	2.711	2.254	1.934	1.882	1.828	1.696	1.218
255	-	4.868	3.638	2.845	2.311	1.994	1.942	1.890	1.754	1.282
260	-	5.027	3.769	2.979	2.369	2.054	2.003	1.951	1.812	1.346
265	-	5.185	3.906	3.113	2.427	2.115	2.064	2.013	1.870	1.410
270	-	5.343	4.064	3.247	2.517	2.175	2.125	2.074	1.927	1.474
275	-	-	4.223	3.381	2.649	2.235	2.186	2.136	1.985	1.538
280	-	-	4.381	3.515	2.781	2.295	2.247	2.197	2.043	1.602
285	-	-	4.540	3.649	2.913	2.356	2.308	2.259	2.101	1.666
290	-	-	4.698	3.783	3.045	2.416	2.368	2.320	2.159	1.730
295	-	-	4.857	3.916	3.177	2.493	2.429	2.382	2.217	1.794
300	-	-	5.016	4.047	3.309	2.614	2.517	2.443	2.275	1.858
305	-	-	5.174	4.179	3.441	2.735	2.630	2.533	2.333	1.922
310	-	-	5.333	4.310	3.573	2.855	2.743	2.632	2.391	1.985
315	-	-	-	4.442	3.705	2.976	2.856	2.731	2.449	2.049
320	-	-	-	4.573	3.837	3.097	2.970	2.831	2.523	2.113
325	-	-	-	4.705	3.966	3.218	3.083	2.930	2.601	2.177
330	-	-	-	4.837	4.092	3.338	3.196	3.030	2.679	2.241
335	-	-	-	4.968	4.219	3.459	3.309	3.129	2.756	2.305
340	-	-	-	5.100	4.346	3.580	3.422	3.228	2.834	2.369

Thickness is intumescent only. Results also apply to I-section beams exposed on all four sides limited to a maximum protection thickness of 4.253mm.

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Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 6 Hempacore ONE 43600 and FD 43601 I-Columns 90 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
70	-	2.489	1.527	0.958	0.794	0.665	0.640	0.606	0.451	0.352
75	-	2.591	1.618	1.015	0.840	0.705	0.679	0.642	0.485	0.387
80	-	2.692	1.750	1.072	0.887	0.744	0.717	0.678	0.519	0.428
85	-	2.794	1.881	1.128	0.933	0.783	0.755	0.714	0.553	0.462
90	-	2.896	2.012	1.186	0.979	0.822	0.793	0.751	0.587	0.496
95	-	2.998	2.144	1.244	1.026	0.862	0.832	0.787	0.621	0.531
100	-	3.100	2.275	1.302	1.072	0.901	0.870	0.823	0.655	0.565
105	-	3.202	2.406	1.360	1.118	0.940	0.908	0.859	0.689	0.599
110	-	3.304	2.500	1.418	1.173	0.979	0.946	0.895	0.723	0.633
115	-	3.406	2.568	1.476	1.230	1.019	0.985	0.931	0.757	0.667
120	-	3.508	2.636	1.534	1.288	1.058	1.023	0.967	0.791	0.702
125	-	3.610	2.704	1.592	1.346	1.097	1.061	1.003	0.825	0.736
130	-	3.712	2.772	1.650	1.403	1.140	1.099	1.039	0.859	0.770
135	-	3.814	2.840	1.709	1.461	1.199	1.142	1.075	0.893	0.804
140	-	3.904	2.909	1.767	1.518	1.258	1.202	1.112	0.927	0.838
145	-	3.981	2.977	1.825	1.576	1.318	1.263	1.161	0.961	0.872
150	-	4.057	3.045	1.883	1.633	1.377	1.323	1.226	0.995	0.907
155	-	4.133	3.113	1.941	1.691	1.436	1.384	1.290	1.029	0.941
160	-	4.210	3.181	1.999	1.748	1.495	1.444	1.354	1.063	0.975
165	-	4.286	3.249	2.057	1.806	1.555	1.505	1.418	1.097	1.009
170	-	4.362	3.317	2.115	1.863	1.614	1.565	1.482	1.133	1.043
175	-	4.439	3.385	2.173	1.921	1.673	1.626	1.547	1.210	1.078
180	-	4.515	3.453	2.231	1.978	1.733	1.686	1.611	1.288	1.112
185	-	4.592	3.522	2.289	2.036	1.792	1.747	1.675	1.365	1.163
190	-	4.668	3.590	2.347	2.094	1.851	1.807	1.739	1.443	1.234
195	-	4.744	3.658	2.405	2.151	1.911	1.868	1.804	1.521	1.305
200	-	4.821	3.726	2.469	2.209	1.970	1.928	1.868	1.598	1.376
205	-	4.897	3.794	2.614	2.266	2.029	1.989	1.932	1.676	1.446
210	-	4.973	3.862	2.759	2.324	2.089	2.049	1.996	1.753	1.517
215	-	5.050	4.013	2.903	2.381	2.148	2.110	2.061	1.831	1.588
220	-	5.126	4.173	3.048	2.439	2.207	2.170	2.125	1.909	1.659
225	-	5.203	4.334	3.193	2.555	2.266	2.231	2.189	1.986	1.730
230	-	5.279	4.495	3.338	2.703	2.326	2.291	2.253	2.064	1.800
235	-	-	4.656	3.483	2.851	2.385	2.352	2.317	2.142	1.871
240	-	-	4.817	3.628	2.998	2.444	2.412	2.382	2.219	1.942
245	-	-	4.978	3.773	3.146	2.565	2.490	2.446	2.297	2.013
250	-	-	5.139	3.950	3.294	2.706	2.624	2.556	2.374	2.084
255	-	-	-	4.196	3.442	2.847	2.759	2.678	2.452	2.155
260	-	-	-	4.441	3.590	2.988	2.893	2.799	2.546	2.225
265	-	-	-	4.687	3.738	3.129	3.028	2.921	2.642	2.296
270	-	-	-	4.932	3.890	3.270	3.163	3.043	2.738	2.367
275	-	-	-	-	4.083	3.411	3.297	3.165	2.834	2.438
280	-	-	-	-	4.276	3.552	3.432	3.286	2.930	2.509
285	-	-	-	-	4.469	3.693	3.566	3.408	3.026	2.579
290	-	-	-	-	4.661	3.834	3.701	3.530	3.122	2.650
295	-	-	-	-	4.854	3.995	3.836	3.652	3.218	2.721
300	-	-	-	-	5.047	4.164	3.997	3.773	3.314	2.791
305	-	-	-	-	5.240	4.332	4.167	3.906	3.410	2.862
310	-	-	-	-	-	4.501	4.337	4.080	3.506	2.933
315	-	-	-	-	-	4.669	4.508	4.254	3.602	3.003
320	-	-	-	-	-	4.837	4.678	4.428	3.698	3.074
325	-	-	-	-	-	5.006	4.849	4.603	3.795	3.145
330	-	-	-	-	-	5.174	5.019	4.777	3.910	3.215
335	-	-	-	-	-	-	5.189	4.951	4.096	3.286
340	-	-	-	-	-	-	-	5.125	4.282	3.357

Thickness is intumescent only. Results also apply to I-section beams exposed on all four sides limited to a maximum protection thickness of 4.253mm.

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Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 7 Hempacore ONE 43600 and FD 43601 I-Columns 105 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
70	-	3.165	2.379	1.559	1.007	0.879	0.853	0.816	0.715	0.529
75	-	3.310	2.488	1.642	1.083	0.933	0.905	0.867	0.769	0.579
80	-	3.454	2.597	1.792	1.144	0.986	0.958	0.919	0.822	0.637
85	-	3.599	2.706	1.942	1.207	1.040	1.011	0.971	0.876	0.695
90	-	3.744	2.814	2.093	1.269	1.093	1.063	1.023	0.929	0.753
95	-	3.890	2.923	2.243	1.331	1.148	1.116	1.075	0.983	0.811
100	-	4.048	3.032	2.393	1.393	1.206	1.172	1.127	1.037	0.869
105	-	4.207	3.141	2.507	1.455	1.263	1.230	1.185	1.090	0.926
110	-	4.365	3.249	2.593	1.517	1.321	1.288	1.243	1.145	0.984
115	-	4.523	3.358	2.678	1.579	1.379	1.345	1.302	1.205	1.042
120	-	4.682	3.467	2.764	1.641	1.436	1.403	1.360	1.265	1.100
125	-	4.840	3.576	2.849	1.703	1.494	1.461	1.419	1.324	1.160
130	-	4.998	3.684	2.935	1.766	1.551	1.519	1.477	1.384	1.222
135	-	5.157	3.793	3.020	1.828	1.609	1.576	1.535	1.444	1.284
140	-	5.315	3.895	3.106	1.890	1.667	1.634	1.594	1.503	1.346
145	-	-	3.979	3.191	1.952	1.724	1.692	1.652	1.563	1.408
150	-	-	4.064	3.277	2.014	1.782	1.750	1.711	1.623	1.470
155	-	-	4.148	3.362	2.076	1.839	1.807	1.769	1.682	1.532
160	-	-	4.233	3.448	2.138	1.897	1.865	1.828	1.742	1.594
165	-	-	4.317	3.534	2.200	1.955	1.923	1.886	1.802	1.656
170	-	-	4.402	3.619	2.262	2.012	1.980	1.945	1.861	1.718
175	-	-	4.487	3.705	2.325	2.070	2.038	2.003	1.921	1.780
180	-	-	4.571	3.790	2.387	2.127	2.096	2.062	1.980	1.842
185	-	-	4.656	3.879	2.449	2.185	2.154	2.120	2.040	1.904
190	-	-	4.740	4.009	2.583	2.243	2.211	2.179	2.100	1.966
195	-	-	4.825	4.140	2.732	2.300	2.269	2.237	2.159	2.028
200	-	-	4.909	4.271	2.880	2.358	2.327	2.296	2.219	2.090
205	-	-	4.994	4.402	3.029	2.415	2.384	2.354	2.279	2.152
210	-	-	5.078	4.532	3.178	2.498	2.442	2.413	2.338	2.214
215	-	-	5.163	4.663	3.326	2.660	2.569	2.489	2.398	2.276
220	-	-	5.247	4.794	3.475	2.821	2.725	2.634	2.458	2.338
225	-	-	5.332	4.925	3.623	2.983	2.881	2.779	2.576	2.400
230	-	-	-	5.055	3.772	3.144	3.037	2.924	2.695	2.463
235	-	-	-	5.186	4.024	3.306	3.193	3.068	2.814	2.548
240	-	-	-	-	4.475	3.468	3.348	3.213	2.933	2.633
245	-	-	-	-	-	3.629	3.504	3.358	3.052	2.718
250	-	-	-	-	-	3.791	3.660	3.503	3.171	2.803
255	-	-	-	-	-	4.053	3.816	3.648	3.290	2.888
260	-	-	-	-	-	4.412	4.156	3.792	3.409	2.973
265	-	-	-	-	-	4.770	4.595	4.166	3.528	3.058
270	-	-	-	-	-	5.129	5.034	4.804	3.647	3.143
275	-	-	-	-	-	-	-	-	3.766	3.228
280	-	-	-	-	-	-	-	-	3.930	3.313
285	-	-	-	-	-	-	-	-	4.398	3.398
290	-	-	-	-	-	-	-	-	4.867	3.483
295	-	-	-	-	-	-	-	-	5.335	3.568
300	-	-	-	-	-	-	-	-	-	3.653
305	-	-	-	-	-	-	-	-	-	3.738
310	-	-	-	-	-	-	-	-	-	3.823
315	-	-	-	-	-	-	-	-	-	3.976
320	-	-	-	-	-	-	-	-	-	4.211
325	-	-	-	-	-	-	-	-	-	4.447
330	-	-	-	-	-	-	-	-	-	4.682
335	-	-	-	-	-	-	-	-	-	4.917
340	-	-	-	-	-	-	-	-	-	-

Thickness is intumescent only. Results also apply to I-section beams exposed on all four sides limited to a maximum protection thickness of 4.253

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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 8 Hempacore ONE 43600 and FD 43601 I-Columns 120 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
70	-	-	3.010	2.334	1.672	1.052	1.039	1.014	0.917	0.727
75	-	-	3.149	2.457	1.762	1.176	1.125	1.087	0.984	0.786
80	-	-	3.288	2.581	1.922	1.300	1.212	1.150	1.050	0.856
85	-	-	3.427	2.704	2.081	1.424	1.298	1.208	1.117	0.927
90	-	-	3.566	2.827	2.241	1.548	1.385	1.266	1.177	0.997
95	-	-	3.705	2.950	2.401	1.673	1.472	1.324	1.235	1.067
100	-	-	3.844	3.073	2.528	1.797	1.558	1.382	1.293	1.143
105	-	-	3.971	3.196	2.636	1.921	1.645	1.440	1.351	1.257
110	-	-	4.096	3.320	2.744	2.045	1.731	1.499	1.409	1.371
115	-	-	4.220	3.443	2.852	2.169	1.818	1.557	1.486	1.486
120	-	-	4.345	3.566	2.961	2.293	1.904	1.615	1.600	1.600
125	-	-	4.469	3.689	3.069	2.417	1.991	1.715	1.715	1.715
130	-	-	4.594	3.812	3.177	2.516	2.078	1.829	1.829	1.829
135	-	-	4.719	3.919	3.285	2.603	2.164	1.943	1.943	1.943
140	-	-	4.843	4.011	3.394	2.689	2.251	2.058	2.058	2.058
145	-	-	4.968	4.103	3.502	2.775	2.337	2.172	2.172	2.172
150	-	-	5.092	4.195	3.610	2.862	2.424	2.287	2.287	2.287
155	-	-	5.217	4.287	3.718	2.948	2.523	2.401	2.401	2.401
160	-	-	-	4.379	3.827	3.034	2.631	2.521	2.521	2.521
165	-	-	-	4.471	3.928	3.121	2.740	2.647	2.647	2.647
170	-	-	-	4.563	4.026	3.207	2.848	2.773	2.773	2.773
175	-	-	-	4.655	4.124	3.293	2.956	2.899	2.899	2.899
180	-	-	-	4.747	4.222	3.380	3.064	3.024	3.024	3.024
185	-	-	-	4.839	4.319	3.466	3.172	3.150	3.150	3.150
190	-	-	-	4.930	4.417	3.552	3.281	3.276	3.276	3.276
195	-	-	-	5.022	4.515	3.639	3.402	3.402	3.402	3.402
200	-	-	-	5.114	4.613	3.725	3.528	3.528	3.528	3.528
205	-	-	-	5.206	4.710	3.811	3.654	3.654	3.654	3.654
210	-	-	-	-	4.808	3.961	3.819	3.819	3.779	3.779
215	-	-	-	-	4.906	4.244	4.212	4.212	3.905	3.905
220	-	-	-	-	5.003	4.604	4.604	4.604	4.373	4.031
225	-	-	-	-	5.101	4.997	4.997	4.997	4.862	4.157
230	-	-	-	-	5.390	5.390	5.390	5.390	5.352	4.283
235	-	-	-	-	-	-	-	-	-	4.409
240	-	-	-	-	-	-	-	-	-	4.534
245	-	-	-	-	-	-	-	-	-	4.660
250	-	-	-	-	-	-	-	-	-	4.786
255	-	-	-	-	-	-	-	-	-	4.912
260	-	-	-	-	-	-	-	-	-	5.038
265	-	-	-	-	-	-	-	-	-	5.164
270	-	-	-	-	-	-	-	-	-	-
275	-	-	-	-	-	-	-	-	-	-
280	-	-	-	-	-	-	-	-	-	-
285	-	-	-	-	-	-	-	-	-	-
290	-	-	-	-	-	-	-	-	-	-
295	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-
305	-	-	-	-	-	-	-	-	-	-
310	-	-	-	-	-	-	-	-	-	-
315	-	-	-	-	-	-	-	-	-	-
320	-	-	-	-	-	-	-	-	-	-
325	-	-	-	-	-	-	-	-	-	-
330	-	-	-	-	-	-	-	-	-	-
335	-	-	-	-	-	-	-	-	-	-
340	-	-	-	-	-	-	-	-	-	-

Thickness is intumescent only. Results also apply to I-section beams exposed on all four sides limited to a maximum protection thickness of 4.253mm.

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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 9 Hempacore ONE 43600 and FD 43601 I-Beams 15 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
60	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
65	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
70	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
75	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
80	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
85	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
90	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
95	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
100	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
105	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
110	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
115	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
120	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
125	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
130	0.213	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
135	0.233	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
140	0.252	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
145	0.271	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
150	0.290	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
155	0.309	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
160	0.328	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
165	0.347	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
170	0.367	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
175	0.386	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
180	0.405	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
185	0.424	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
190	0.443	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
195	0.462	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
200	0.481	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
205	0.500	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
210	0.520	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
215	0.539	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
220	0.558	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
225	0.577	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
230	0.596	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
235	0.615	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
240	0.634	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
245	0.654	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
250	0.673	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
255	0.692	0.226	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
260	0.711	0.249	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
265	0.730	0.271	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
270	0.749	0.293	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
275	0.768	0.316	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
280	0.788	0.338	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
285	0.807	0.360	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
290	0.826	0.382	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
295	0.845	0.405	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
300	0.864	0.427	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
305	0.883	0.449	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
310	0.902	0.472	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
315	0.922	0.494	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
320	0.941	0.516	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
325	0.963	0.538	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
330	0.986	0.561	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209

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

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HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 10 Hempacore ONE 43600 and FD 43601 I-Beams 30 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
60	0.527	0.226	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
65	0.553	0.247	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
70	0.580	0.268	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
75	0.606	0.290	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
80	0.633	0.311	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
85	0.659	0.332	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
90	0.686	0.354	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
95	0.712	0.375	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
100	0.738	0.396	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
105	0.765	0.417	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
110	0.791	0.439	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
115	0.818	0.460	0.211	0.209	0.209	0.209	0.209	0.209	0.209	0.209
120	0.844	0.481	0.234	0.209	0.209	0.209	0.209	0.209	0.209	0.209
125	0.870	0.503	0.258	0.209	0.209	0.209	0.209	0.209	0.209	0.209
130	0.897	0.524	0.281	0.209	0.209	0.209	0.209	0.209	0.209	0.209
135	0.923	0.545	0.305	0.210	0.209	0.209	0.209	0.209	0.209	0.209
140	0.953	0.567	0.329	0.233	0.209	0.209	0.209	0.209	0.209	0.209
145	1.002	0.588	0.352	0.256	0.209	0.209	0.209	0.209	0.209	0.209
150	1.050	0.609	0.376	0.279	0.209	0.209	0.209	0.209	0.209	0.209
155	1.098	0.631	0.400	0.302	0.212	0.209	0.209	0.209	0.209	0.209
160	1.147	0.652	0.423	0.325	0.232	0.209	0.209	0.209	0.209	0.209
165	1.195	0.673	0.447	0.348	0.251	0.209	0.209	0.209	0.209	0.209
170	1.243	0.694	0.470	0.371	0.270	0.209	0.209	0.209	0.209	0.209
175	1.291	0.716	0.494	0.394	0.290	0.209	0.209	0.209	0.209	0.209
180	1.340	0.737	0.518	0.417	0.309	0.209	0.209	0.209	0.209	0.209
185	1.388	0.758	0.541	0.440	0.329	0.209	0.209	0.209	0.209	0.209
190	1.436	0.780	0.565	0.463	0.348	0.209	0.209	0.209	0.209	0.209
195	1.485	0.801	0.589	0.486	0.367	0.209	0.209	0.209	0.209	0.209
200	1.533	0.822	0.612	0.509	0.387	0.209	0.209	0.209	0.209	0.209
205	1.581	0.844	0.636	0.532	0.406	0.209	0.209	0.209	0.209	0.209
210	1.630	0.865	0.659	0.555	0.425	0.209	0.209	0.209	0.209	0.209
215	1.678	0.886	0.683	0.578	0.445	0.209	0.209	0.209	0.209	0.209
220	1.726	0.908	0.707	0.601	0.464	0.209	0.209	0.209	0.209	0.209
225	1.774	0.929	0.730	0.624	0.484	0.209	0.209	0.209	0.209	0.209
230	1.823	0.958	0.754	0.647	0.503	0.209	0.209	0.209	0.209	0.209
235	1.869	1.011	0.778	0.670	0.522	0.209	0.209	0.209	0.209	0.209
240	1.914	1.064	0.801	0.693	0.542	0.209	0.209	0.209	0.209	0.209
245	1.958	1.117	0.825	0.716	0.561	0.209	0.209	0.209	0.209	0.209
250	2.003	1.169	0.848	0.739	0.580	0.209	0.209	0.209	0.209	0.209
255	2.047	1.222	0.872	0.762	0.600	0.209	0.209	0.209	0.209	0.209
260	2.092	1.275	0.896	0.784	0.619	0.209	0.209	0.209	0.209	0.209
265	2.136	1.328	0.919	0.807	0.639	0.209	0.209	0.209	0.209	0.209
270	2.180	1.381	0.943	0.830	0.658	0.209	0.209	0.209	0.209	0.209
275	2.225	1.434	0.979	0.853	0.677	0.218	0.209	0.209	0.209	0.209
280	2.269	1.487	1.017	0.876	0.697	0.243	0.209	0.209	0.209	0.209
285	2.314	1.540	1.055	0.899	0.716	0.268	0.209	0.209	0.209	0.209
290	2.358	1.593	1.092	0.922	0.736	0.293	0.209	0.209	0.209	0.209
295	2.403	1.646	1.130	0.945	0.755	0.318	0.223	0.209	0.209	0.209
300	2.447	1.699	1.168	0.970	0.774	0.343	0.245	0.209	0.209	0.209
305	2.491	1.752	1.206	0.995	0.794	0.368	0.267	0.209	0.209	0.209
310	2.536	1.805	1.243	1.020	0.813	0.393	0.289	0.209	0.209	0.209
315	2.580	1.855	1.281	1.045	0.832	0.418	0.311	0.209	0.209	0.209
320	2.625	1.891	1.319	1.069	0.852	0.443	0.333	0.209	0.209	0.209
325	2.669	1.926	1.356	1.094	0.871	0.468	0.355	0.213	0.209	0.209
330	2.714	1.962	1.394	1.119	0.891	0.492	0.376	0.231	0.209	0.209

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

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HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 11 Hempacore ONE 43600 and FD 43601 I-Beams 45 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
60	1.094	0.669	0.410	0.261	0.209	0.209	0.209	0.209	0.209	0.209
65	1.139	0.691	0.436	0.285	0.209	0.209	0.209	0.209	0.209	0.209
70	1.184	0.714	0.462	0.309	0.209	0.209	0.209	0.209	0.209	0.209
75	1.228	0.736	0.489	0.333	0.213	0.209	0.209	0.209	0.209	0.209
80	1.273	0.758	0.515	0.357	0.234	0.209	0.209	0.209	0.209	0.209
85	1.318	0.781	0.541	0.381	0.254	0.209	0.209	0.209	0.209	0.209
90	1.363	0.803	0.568	0.405	0.275	0.209	0.209	0.209	0.209	0.209
95	1.408	0.825	0.594	0.428	0.296	0.209	0.209	0.209	0.209	0.209
100	1.453	0.848	0.621	0.452	0.316	0.209	0.209	0.209	0.209	0.209
105	1.497	0.870	0.647	0.476	0.337	0.209	0.209	0.209	0.209	0.209
110	1.542	0.892	0.673	0.500	0.357	0.209	0.209	0.209	0.209	0.209
115	1.587	0.915	0.700	0.524	0.378	0.209	0.209	0.209	0.209	0.209
120	1.632	0.937	0.726	0.548	0.398	0.231	0.209	0.209	0.209	0.209
125	1.677	0.977	0.752	0.572	0.419	0.254	0.229	0.209	0.209	0.209
130	1.721	1.028	0.779	0.595	0.439	0.277	0.251	0.213	0.209	0.209
135	1.766	1.078	0.805	0.619	0.460	0.300	0.273	0.233	0.209	0.209
140	1.811	1.128	0.832	0.643	0.480	0.322	0.295	0.253	0.209	0.209
145	1.860	1.179	0.858	0.667	0.501	0.345	0.317	0.273	0.209	0.209
150	1.940	1.229	0.884	0.691	0.522	0.368	0.339	0.293	0.223	0.209
155	2.019	1.279	0.911	0.715	0.542	0.391	0.361	0.313	0.238	0.209
160	2.098	1.330	0.937	0.739	0.563	0.414	0.383	0.333	0.253	0.209
165	2.178	1.380	0.987	0.762	0.583	0.437	0.405	0.353	0.269	0.209
170	2.257	1.430	1.047	0.786	0.604	0.460	0.427	0.373	0.284	0.209
175	2.336	1.481	1.107	0.810	0.624	0.482	0.449	0.393	0.299	0.209
180	2.416	1.531	1.167	0.834	0.645	0.505	0.471	0.413	0.314	0.209
185	2.495	1.581	1.227	0.858	0.665	0.528	0.493	0.433	0.329	0.209
190	2.574	1.632	1.286	0.882	0.686	0.551	0.515	0.453	0.344	0.209
195	2.654	1.682	1.346	0.906	0.706	0.574	0.537	0.473	0.359	0.209
200	2.733	1.733	1.406	0.930	0.727	0.597	0.559	0.493	0.374	0.209
205	2.812	1.783	1.466	0.960	0.748	0.620	0.581	0.513	0.389	0.209
210	2.892	1.833	1.526	1.004	0.768	0.642	0.603	0.533	0.404	0.209
215	2.971	1.888	1.586	1.048	0.789	0.665	0.625	0.553	0.420	0.212
220	3.335	1.946	1.646	1.091	0.809	0.688	0.647	0.572	0.435	0.226
225	3.883	2.003	1.706	1.135	0.830	0.711	0.668	0.592	0.450	0.239
230	-	2.061	1.766	1.179	0.850	0.734	0.690	0.612	0.465	0.253
235	-	2.118	1.826	1.222	0.871	0.757	0.712	0.632	0.480	0.266
240	-	2.175	1.874	1.266	0.891	0.780	0.734	0.652	0.495	0.280
245	-	2.233	1.914	1.310	0.912	0.802	0.756	0.672	0.510	0.293
250	-	2.290	1.954	1.353	0.933	0.825	0.778	0.692	0.525	0.307
255	-	2.347	1.994	1.397	0.961	0.848	0.800	0.712	0.540	0.321
260	-	2.405	2.034	1.441	1.003	0.871	0.822	0.732	0.555	0.334
265	-	2.462	2.075	1.484	1.045	0.894	0.844	0.752	0.571	0.348
270	-	2.520	2.115	1.528	1.087	0.917	0.866	0.772	0.586	0.361
275	-	2.577	2.155	1.572	1.129	0.940	0.888	0.792	0.601	0.375
280	-	2.634	2.195	1.615	1.171	0.969	0.910	0.812	0.616	0.388
285	-	2.692	2.235	1.659	1.213	1.001	0.932	0.832	0.631	0.402
290	-	2.749	2.275	1.703	1.254	1.032	0.957	0.852	0.646	0.416
295	-	2.807	2.315	1.746	1.296	1.064	0.986	0.872	0.661	0.429
300	-	2.864	2.356	1.790	1.338	1.096	1.015	0.892	0.676	0.443
305	-	2.921	2.396	1.834	1.380	1.128	1.045	0.912	0.691	0.456
310	-	2.979	2.436	1.877	1.422	1.159	1.074	0.932	0.706	0.470
315	-	3.096	2.476	1.919	1.464	1.191	1.103	0.954	0.721	0.483
320	-	3.253	2.516	1.962	1.506	1.223	1.132	0.981	0.737	0.497
325	-	3.411	2.556	2.004	1.547	1.254	1.161	1.008	0.752	0.511
330	-	3.568	2.596	2.047	1.589	1.286	1.190	1.035	0.767	0.524

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HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 12 Hempacore ONE 43600 and FD 43601 I-Beams 60 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
60	1.609	1.072	0.761	0.551	0.415	0.309	0.262	0.209	0.209	0.209
65	1.700	1.116	0.780	0.576	0.440	0.332	0.284	0.234	0.209	0.209
70	1.792	1.159	0.799	0.601	0.465	0.355	0.305	0.254	0.209	0.209
75	1.893	1.202	0.817	0.626	0.490	0.378	0.327	0.273	0.209	0.209
80	2.007	1.245	0.836	0.650	0.516	0.400	0.349	0.293	0.209	0.209
85	2.122	1.288	0.854	0.675	0.541	0.423	0.371	0.313	0.209	0.209
90	2.237	1.332	0.873	0.700	0.566	0.446	0.393	0.333	0.212	0.209
95	2.351	1.375	0.891	0.725	0.592	0.468	0.415	0.353	0.232	0.209
100	2.466	1.418	0.910	0.749	0.617	0.491	0.437	0.373	0.251	0.209
105	2.581	1.461	0.928	0.774	0.642	0.514	0.459	0.393	0.271	0.209
110	2.695	1.504	0.950	0.799	0.667	0.536	0.481	0.413	0.291	0.209
115	2.810	1.548	1.000	0.824	0.693	0.559	0.503	0.433	0.310	0.209
120	2.925	1.591	1.050	0.849	0.718	0.582	0.525	0.453	0.330	0.209
125	3.039	1.634	1.100	0.873	0.743	0.604	0.546	0.472	0.350	0.209
130	3.154	1.677	1.150	0.898	0.768	0.627	0.568	0.492	0.369	0.222
135	-	1.720	1.200	0.923	0.794	0.650	0.590	0.512	0.389	0.241
140	-	1.764	1.250	0.951	0.819	0.672	0.612	0.532	0.409	0.260
145	-	1.807	1.300	1.007	0.844	0.695	0.634	0.552	0.429	0.279
150	-	1.851	1.350	1.064	0.870	0.718	0.656	0.572	0.448	0.298
155	-	2.057	1.400	1.120	0.895	0.741	0.678	0.592	0.468	0.318
160	-	2.264	1.450	1.176	0.920	0.763	0.700	0.612	0.488	0.337
165	-	2.471	1.500	1.233	0.946	0.786	0.722	0.632	0.507	0.356
170	-	2.678	1.550	1.289	1.005	0.809	0.744	0.652	0.527	0.375
175	-	2.885	1.600	1.345	1.065	0.831	0.765	0.672	0.547	0.394
180	-	3.092	1.650	1.401	1.124	0.854	0.787	0.691	0.566	0.413
185	-	3.299	1.700	1.458	1.184	0.877	0.809	0.711	0.586	0.432
190	-	3.505	1.750	1.514	1.243	0.899	0.831	0.731	0.606	0.452
195	-	3.712	1.800	1.570	1.303	0.922	0.853	0.751	0.625	0.471
200	-	3.919	1.850	1.627	1.362	0.945	0.875	0.771	0.645	0.490
205	-	4.126	1.920	1.683	1.422	0.988	0.897	0.791	0.665	0.509
210	-	-	1.989	1.739	1.481	1.032	0.919	0.811	0.685	0.528
215	-	-	2.059	1.795	1.541	1.076	0.941	0.831	0.704	0.547
220	-	-	2.129	1.852	1.600	1.120	0.981	0.851	0.724	0.566
225	-	-	2.198	1.906	1.660	1.164	1.025	0.871	0.744	0.586
230	-	-	2.268	1.960	1.719	1.208	1.069	0.891	0.763	0.605
235	-	-	2.338	2.015	1.779	1.252	1.113	0.910	0.783	0.624
240	-	-	2.408	2.069	1.838	1.296	1.157	0.930	0.803	0.643
245	-	-	2.477	2.123	1.886	1.340	1.201	0.957	0.822	0.662
250	-	-	2.547	2.178	1.930	1.385	1.245	1.003	0.842	0.681
255	-	-	2.617	2.232	1.974	1.429	1.289	1.050	0.862	0.700
260	-	-	2.687	2.286	2.019	1.473	1.333	1.096	0.881	0.720
265	-	-	2.756	2.341	2.063	1.517	1.377	1.142	0.901	0.739
270	-	-	2.826	2.395	2.108	1.561	1.421	1.188	0.921	0.758
275	-	-	2.896	2.449	2.152	1.605	1.465	1.234	0.941	0.777
280	-	-	2.966	2.504	2.196	1.649	1.509	1.280	0.979	0.796
285	-	-	3.071	2.558	2.241	1.693	1.553	1.327	1.024	0.815
290	-	-	3.215	2.612	2.285	1.737	1.597	1.373	1.068	0.834
295	-	-	3.358	2.666	2.330	1.781	1.641	1.419	1.112	0.854
300	-	-	3.502	2.721	2.374	1.825	1.685	1.465	1.156	0.873
305	-	-	3.646	2.775	2.418	1.871	1.729	1.511	1.201	0.892
310	-	-	3.790	2.829	2.463	1.921	1.773	1.557	1.245	0.911
315	-	-	3.933	2.884	2.507	1.970	1.817	1.604	1.289	0.930
320	-	-	4.077	2.938	2.552	2.020	1.862	1.650	1.334	0.955
325	-	-	4.221	2.992	2.596	2.069	1.910	1.696	1.378	1.001
330	-	-	-	3.078	2.640	2.119	1.957	1.742	1.422	1.046

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Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 13 Hempacore ONE 43600 and FD 43601 I-Beams 75 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
60	2.748	1.442	1.069	0.840	0.672	0.539	0.492	0.424	0.318	0.209
65	2.996	1.521	1.116	0.864	0.694	0.565	0.518	0.451	0.341	0.217
70	3.244	1.600	1.164	0.888	0.715	0.590	0.545	0.478	0.363	0.238
75	-	1.678	1.212	0.913	0.737	0.616	0.571	0.505	0.385	0.258
80	-	1.757	1.260	0.937	0.758	0.641	0.597	0.532	0.407	0.279
85	-	1.836	1.308	0.973	0.780	0.667	0.624	0.559	0.429	0.300
90	-	1.935	1.356	1.016	0.801	0.692	0.650	0.586	0.451	0.321
95	-	2.039	1.404	1.059	0.823	0.718	0.676	0.613	0.473	0.342
100	-	2.143	1.452	1.102	0.844	0.743	0.703	0.640	0.495	0.363
105	-	2.247	1.500	1.145	0.865	0.769	0.729	0.667	0.517	0.384
110	-	2.351	1.548	1.188	0.887	0.794	0.756	0.694	0.539	0.404
115	-	2.455	1.596	1.231	0.908	0.820	0.782	0.721	0.561	0.425
120	-	2.559	1.644	1.274	0.930	0.845	0.808	0.748	0.583	0.446
125	-	2.663	1.692	1.317	0.960	0.871	0.835	0.775	0.605	0.467
130	-	2.767	1.740	1.360	1.014	0.896	0.861	0.802	0.627	0.488
135	-	2.870	1.788	1.403	1.067	0.922	0.887	0.829	0.649	0.509
140	-	2.974	1.836	1.446	1.121	0.950	0.914	0.856	0.671	0.530
145	-	3.388	3.388	1.489	1.175	1.002	0.940	0.883	0.693	0.550
150	-	-	-	1.532	1.228	1.054	0.986	0.910	0.715	0.571
155	-	-	-	1.575	1.282	1.105	1.035	0.937	0.737	0.592
160	-	-	-	1.618	1.335	1.157	1.085	0.977	0.759	0.613
165	-	-	-	1.661	1.389	1.209	1.135	1.023	0.781	0.634
170	-	-	-	1.704	1.442	1.260	1.185	1.068	0.803	0.655
175	-	-	-	1.747	1.496	1.312	1.235	1.113	0.825	0.676
180	-	-	-	1.790	1.550	1.364	1.285	1.158	0.847	0.696
185	-	-	-	1.833	1.603	1.415	1.335	1.204	0.869	0.717
190	-	-	-	1.897	1.657	1.467	1.385	1.249	0.891	0.738
195	-	-	-	1.976	1.710	1.519	1.435	1.294	0.913	0.759
200	-	-	-	2.054	1.764	1.570	1.485	1.340	0.935	0.780
205	-	-	-	2.133	1.817	1.622	1.534	1.385	0.974	0.801
210	-	-	-	2.212	1.877	1.674	1.584	1.430	1.026	0.821
215	-	-	-	2.291	1.945	1.725	1.634	1.475	1.077	0.842
220	-	-	-	2.370	2.014	1.777	1.684	1.521	1.129	0.863
225	-	-	-	2.448	2.082	1.829	1.734	1.566	1.180	0.884
230	-	-	-	2.527	2.150	1.884	1.784	1.611	1.232	0.905
235	-	-	-	2.606	2.219	1.941	1.834	1.656	1.283	0.926
240	-	-	-	2.685	2.287	1.998	1.886	1.702	1.335	0.950
245	-	-	-	2.764	2.356	2.055	1.940	1.747	1.386	1.013
250	-	-	-	2.843	2.424	2.112	1.994	1.792	1.438	1.075
255	-	-	-	2.921	2.492	2.169	2.048	1.837	1.489	1.138
260	-	-	-	3.000	2.561	2.226	2.102	1.887	1.541	1.201
265	-	-	-	3.123	2.629	2.283	2.156	1.939	1.593	1.264
270	-	-	-	3.246	2.698	2.340	2.210	1.992	1.644	1.327
275	-	-	-	3.369	2.766	2.397	2.264	2.044	1.696	1.390
280	-	-	-	3.493	2.834	2.454	2.318	2.096	1.747	1.453
285	-	-	-	3.616	2.903	2.511	2.372	2.148	1.799	1.515
290	-	-	-	3.740	2.971	2.568	2.426	2.200	1.850	1.578
295	-	-	-	3.863	3.055	2.625	2.480	2.252	1.900	1.641
300	-	-	-	3.987	3.152	2.682	2.534	2.304	1.949	1.704
305	-	-	-	4.110	3.249	2.739	2.588	2.356	1.998	1.767
310	-	-	-	4.234	3.345	2.795	2.642	2.408	2.048	1.830
315	-	-	-	-	3.442	2.852	2.696	2.460	2.097	1.879
320	-	-	-	-	3.539	2.909	2.749	2.512	2.147	1.921
325	-	-	-	-	3.635	2.966	2.803	2.564	2.196	1.964
330	-	-	-	-	3.732	3.095	2.857	2.616	2.245	2.007

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

Issued: 23rd December 2014
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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 14 Hempacore ONE 43600 and FD 43601 I-Beams 90 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
60	-	1.792	1.370	1.035	0.909	0.774	0.723	0.643	0.517	0.385
65	-	2.012	1.448	1.162	0.950	0.796	0.743	0.667	0.545	0.414
70	-	2.233	1.527	1.424	0.990	0.818	0.763	0.690	0.573	0.442
75	-	2.453	1.686	1.686	1.031	0.840	0.783	0.714	0.601	0.471
80	-	2.673	1.949	1.949	1.071	0.862	0.803	0.738	0.629	0.499
85	-	2.893	2.211	2.211	1.112	0.885	0.823	0.761	0.657	0.528
90	-	3.114	2.474	2.474	1.153	0.907	0.843	0.785	0.684	0.556
95	-	-	2.736	2.736	1.193	0.929	0.863	0.809	0.712	0.585
100	-	-	2.999	2.999	1.234	0.957	0.883	0.832	0.740	0.613
105	-	-	3.261	3.261	1.274	1.003	0.902	0.856	0.768	0.642
110	-	-	3.523	3.523	1.315	1.049	0.922	0.880	0.796	0.670
115	-	-	3.786	3.786	1.356	1.095	0.942	0.903	0.824	0.699
120	-	-	4.048	4.048	1.396	1.141	0.990	0.927	0.852	0.727
125	-	-	-	-	1.437	1.187	1.042	0.957	0.880	0.756
130	-	-	-	-	1.477	1.234	1.093	1.008	0.908	0.784
135	-	-	-	-	1.518	1.280	1.145	1.058	0.936	0.813
140	-	-	-	-	1.558	1.326	1.197	1.108	0.974	0.841
145	-	-	-	-	1.599	1.372	1.248	1.158	1.017	0.869
150	-	-	-	-	1.640	1.418	1.300	1.209	1.060	0.898
155	-	-	-	-	1.680	1.464	1.352	1.259	1.103	0.926
160	-	-	-	-	1.721	1.510	1.404	1.309	1.146	0.959
165	-	-	-	-	1.761	1.556	1.455	1.359	1.189	1.001
170	-	-	-	-	1.802	1.603	1.507	1.410	1.232	1.042
175	-	-	-	-	1.843	1.649	1.559	1.460	1.274	1.083
180	-	-	-	-	1.934	1.695	1.611	1.510	1.317	1.125
185	-	-	-	-	2.037	1.741	1.662	1.560	1.360	1.166
190	-	-	-	-	2.140	1.787	1.714	1.611	1.403	1.207
195	-	-	-	-	2.242	1.833	1.766	1.661	1.446	1.248
200	-	-	-	-	2.345	1.902	1.817	1.711	1.489	1.290
205	-	-	-	-	2.448	1.983	1.878	1.761	1.532	1.331
210	-	-	-	-	2.551	2.065	1.953	1.811	1.575	1.372
215	-	-	-	-	2.653	2.146	2.029	1.866	1.618	1.414
220	-	-	-	-	2.756	2.228	2.104	1.933	1.660	1.455
225	-	-	-	-	2.859	2.310	2.180	2.000	1.703	1.496
230	-	-	-	-	2.962	2.391	2.255	2.067	1.746	1.538
235	-	-	-	-	3.175	2.473	2.331	2.134	1.789	1.579
240	-	-	-	-	3.460	2.554	2.406	2.201	1.832	1.620
245	-	-	-	-	3.745	2.636	2.482	2.268	1.888	1.661
250	-	-	-	-	4.030	2.718	2.557	2.335	1.955	1.703
255	-	-	-	-	-	2.799	2.633	2.402	2.021	1.744
260	-	-	-	-	-	2.881	2.708	2.469	2.088	1.785
265	-	-	-	-	-	2.963	2.784	2.536	2.154	1.827
270	-	-	-	-	-	3.138	2.859	2.603	2.221	1.878
275	-	-	-	-	-	3.402	2.935	2.670	2.287	1.944
280	-	-	-	-	-	3.666	3.035	2.737	2.354	2.009
285	-	-	-	-	-	3.929	3.334	2.804	2.420	2.075
290	-	-	-	-	-	4.193	3.634	2.871	2.486	2.140
295	-	-	-	-	-	-	3.933	2.938	2.553	2.205
300	-	-	-	-	-	-	4.232	3.025	2.619	2.271
305	-	-	-	-	-	-	-	3.463	2.686	2.336
310	-	-	-	-	-	-	-	3.901	2.752	2.401
315	-	-	-	-	-	-	-	-	2.819	2.467
320	-	-	-	-	-	-	-	-	2.885	2.532
325	-	-	-	-	-	-	-	-	2.951	2.598
330	-	-	-	-	-	-	-	-	3.134	2.663

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

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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 15 Hempacore ONE 43600 and FD 43601 I-Beams 105 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
60	-	-	1.679	1.363	1.152	0.990	0.930	0.852	0.725	0.587
65	-	-	1.784	1.442	1.212	1.030	0.972	0.883	0.748	0.614
70	-	-	1.922	1.522	1.272	1.071	1.013	0.913	0.770	0.641
75	-	-	2.119	1.686	1.333	1.112	1.054	0.944	0.793	0.668
80	-	-	2.316	1.949	1.393	1.153	1.096	0.986	0.816	0.695
85	-	-	2.512	2.211	1.453	1.194	1.137	1.029	0.839	0.722
90	-	-	2.709	2.474	1.513	1.235	1.178	1.073	0.862	0.749
95	-	-	2.905	2.736	1.573	1.276	1.220	1.116	0.884	0.776
100	-	-	3.102	2.999	1.633	1.317	1.261	1.159	0.907	0.802
105	-	-	-	3.261	1.693	1.358	1.302	1.202	0.930	0.829
110	-	-	-	3.523	1.754	1.399	1.344	1.245	0.962	0.856
115	-	-	-	3.786	1.814	1.440	1.385	1.288	1.013	0.883
120	-	-	-	4.048	1.894	1.481	1.427	1.331	1.064	0.910
125	-	-	-	-	2.005	1.522	1.468	1.374	1.114	0.937
130	-	-	-	-	2.116	1.563	1.509	1.417	1.165	0.978
135	-	-	-	-	2.228	1.603	1.551	1.461	1.216	1.026
140	-	-	-	-	2.339	1.644	1.592	1.504	1.267	1.073
145	-	-	-	-	2.450	1.685	1.633	1.547	1.318	1.120
150	-	-	-	-	2.561	1.726	1.675	1.590	1.368	1.168
155	-	-	-	-	2.672	1.767	1.716	1.633	1.419	1.215
160	-	-	-	-	2.783	1.808	1.757	1.676	1.470	1.263
165	-	-	-	-	2.894	1.849	1.799	1.719	1.521	1.310
170	-	-	-	-	3.005	1.890	1.840	1.762	1.572	1.358
175	-	-	-	-	3.116	2.118	2.118	1.805	1.622	1.405
180	-	-	-	-	-	2.471	2.471	1.848	1.673	1.453
185	-	-	-	-	-	2.825	2.825	1.939	1.724	1.500
190	-	-	-	-	-	-	3.178	2.032	1.775	1.547
195	-	-	-	-	-	-	3.532	2.125	1.825	1.595
200	-	-	-	-	-	-	3.885	2.218	1.890	1.642
205	-	-	-	-	-	-	4.239	2.311	1.968	1.690
210	-	-	-	-	-	-	-	2.403	2.046	1.737
215	-	-	-	-	-	-	-	2.496	2.125	1.785
220	-	-	-	-	-	-	-	2.589	2.203	1.832
225	-	-	-	-	-	-	-	2.682	2.281	1.899
230	-	-	-	-	-	-	-	2.774	2.359	1.977
235	-	-	-	-	-	-	-	2.867	2.437	2.056
240	-	-	-	-	-	-	-	2.960	2.515	2.134
245	-	-	-	-	-	-	-	3.131	2.593	2.212
250	-	-	-	-	-	-	-	3.366	2.671	2.291
255	-	-	-	-	-	-	-	3.602	2.749	2.369
260	-	-	-	-	-	-	-	3.837	2.827	2.447
265	-	-	-	-	-	-	-	4.073	2.905	2.526
270	-	-	-	-	-	-	-	-	2.983	2.604
275	-	-	-	-	-	-	-	-	3.302	2.683
280	-	-	-	-	-	-	-	-	3.695	2.761
285	-	-	-	-	-	-	-	-	-	2.839
290	-	-	-	-	-	-	-	-	-	2.918
295	-	-	-	-	-	-	-	-	-	2.996
300	-	-	-	-	-	-	-	-	-	3.494
305	-	-	-	-	-	-	-	-	-	-
310	-	-	-	-	-	-	-	-	-	-
315	-	-	-	-	-	-	-	-	-	-
320	-	-	-	-	-	-	-	-	-	-
325	-	-	-	-	-	-	-	-	-	-
330	-	-	-	-	-	-	-	-	-	-

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

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HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 16 Hempacore ONE 43600 and FD 43601 I-Beams 120 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	550	600	620	650	700	750
60	-	-	2.521	1.633	1.397	1.216	1.150	1.071	0.907	0.785
65	-	-	2.732	1.736	1.478	1.283	1.214	1.127	0.952	0.815
70	-	-	-	1.838	1.560	1.351	1.279	1.183	0.997	0.846
75	-	-	-	2.039	1.641	1.418	1.343	1.238	1.043	0.877
80	-	-	-	2.254	1.722	1.485	1.407	1.294	1.088	0.908
85	-	-	-	2.468	1.804	1.553	1.471	1.349	1.133	0.938
90	-	-	-	2.682	1.908	1.620	1.535	1.405	1.179	0.984
95	-	-	-	2.897	2.043	1.687	1.600	1.461	1.224	1.033
100	-	-	-	3.111	2.177	1.755	1.664	1.516	1.269	1.083
105	-	-	-	-	2.312	1.822	1.728	1.572	1.315	1.132
110	-	-	-	-	2.446	1.918	1.792	1.628	1.360	1.181
115	-	-	-	-	2.581	2.034	1.861	1.683	1.405	1.231
120	-	-	-	-	2.716	2.149	1.970	1.739	1.451	1.280
125	-	-	-	-	2.850	2.265	2.078	1.795	1.496	1.330
130	-	-	-	-	2.985	2.381	2.187	1.897	1.541	1.379
135	-	-	-	-	3.119	2.497	2.295	2.000	1.587	1.429
140	-	-	-	-	-	-	-	-	1.632	1.478
145	-	-	-	-	-	-	-	-	1.677	1.527
150	-	-	-	-	-	-	-	-	1.723	1.577
155	-	-	-	-	-	-	-	-	1.768	1.626
160	-	-	-	-	-	-	-	-	1.813	1.676
165	-	-	-	-	-	-	-	-	1.944	1.725
170	-	-	-	-	-	-	-	-	2.430	1.775
175	-	-	-	-	-	-	-	-	2.916	1.824
180	-	-	-	-	-	-	-	-	3.402	1.892
185	-	-	-	-	-	-	-	-	3.888	1.982
190	-	-	-	-	-	-	-	-	-	2.071
195	-	-	-	-	-	-	-	-	-	2.160
200	-	-	-	-	-	-	-	-	-	2.249
205	-	-	-	-	-	-	-	-	-	2.338
210	-	-	-	-	-	-	-	-	-	2.428
215	-	-	-	-	-	-	-	-	-	2.517
220	-	-	-	-	-	-	-	-	-	2.606
225	-	-	-	-	-	-	-	-	-	2.695
230	-	-	-	-	-	-	-	-	-	2.784
235	-	-	-	-	-	-	-	-	-	2.874
240	-	-	-	-	-	-	-	-	-	2.963
245	-	-	-	-	-	-	-	-	-	3.174
250	-	-	-	-	-	-	-	-	-	3.480
255	-	-	-	-	-	-	-	-	-	3.786
260	-	-	-	-	-	-	-	-	-	4.092
265	-	-	-	-	-	-	-	-	-	-
270	-	-	-	-	-	-	-	-	-	-
275	-	-	-	-	-	-	-	-	-	-
280	-	-	-	-	-	-	-	-	-	-
285	-	-	-	-	-	-	-	-	-	-
290	-	-	-	-	-	-	-	-	-	-
295	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-
305	-	-	-	-	-	-	-	-	-	-
310	-	-	-	-	-	-	-	-	-	-
315	-	-	-	-	-	-	-	-	-	-
320	-	-	-	-	-	-	-	-	-	-
325	-	-	-	-	-	-	-	-	-	-
330	-	-	-	-	-	-	-	-	-	-

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

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HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 17 Hempacore ONE 43600 and FD 43601 RHS 15 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
50	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
55	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
60	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
65	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
70	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
75	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
80	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
85	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
90	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
95	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
100	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
105	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
110	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
115	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
120	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
125	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
130	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
135	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
140	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
145	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
150	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
155	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
160	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
165	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
170	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
175	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
180	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
185	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
190	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
195	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
200	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
205	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
210	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
215	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
220	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
225	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
230	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
235	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
240	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
245	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
250	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
255	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
260	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
265	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236
270	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236
275	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236
280	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236
285	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236
290	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236
295	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236
300	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236
305	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236
310	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236
315	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236
320	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236
325	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236

Thickness is intumescent only.

Issued: 23rd December 2014
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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 18 Hempacore ONE 43600 and FD 43601 RHS 30 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
50	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
55	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
60	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
65	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
70	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
75	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
80	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
85	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
90	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
95	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
100	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
105	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236
110	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236
115	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236
120	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236
125	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236
130	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236
135	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236
140	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236
145	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236
150	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236
155	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236
160	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236
165	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236
170	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236
175	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236
180	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
185	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
190	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
195	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
200	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
205	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
210	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
215	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
220	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
225	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
230	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
235	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
240	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
245	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
250	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
255	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
260	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
265	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
270	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
275	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
280	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
285	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
290	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
295	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
300	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
305	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
310	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
315	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
320	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
325	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236

Thickness is intumescent only.

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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 19 Hempacore ONE 43600 and FD 43601 RHS 45 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
50	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
55	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
60	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236	0.236
65	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236	0.236
70	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236	0.236
75	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236
80	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236
85	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236
90	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236
95	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236
100	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
105	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
110	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
115	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
120	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
125	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
130	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
135	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
140	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
145	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
150	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
155	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
160	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
165	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
170	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
175	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
180	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
185	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
190	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
195	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
200	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
205	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
210	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
215	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940
220	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940
225	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940
230	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940
235	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940
240	-	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940
245	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
250	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
255	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
260	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
265	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
270	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
275	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
280	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
285	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
290	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
295	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
300	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
305	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
310	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
315	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
320	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
325	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940

Thickness is intumescent only.

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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 20 Hempacore ONE 43600 and FD 43601 RHS 60 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
50	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236
55	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236	0.236
60	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236
65	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236	0.236
70	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
75	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
80	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
85	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
90	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
95	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
100	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
105	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
110	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
115	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
120	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
125	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
130	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
135	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
140	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
145	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940
150	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940
155	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940
160	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940
165	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
170	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
175	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
180	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
185	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
190	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
195	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
200	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
205	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
210	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940
215	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940
220	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940
225	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940
230	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940
235	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940
240	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020	2.940
245	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020	2.940
250	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020	2.940
255	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940
260	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940
265	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940
270	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020
275	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020
280	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020
285	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020
290	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020
295	-	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020
300	-	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020
305	-	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020
310	-	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020
315	-	-	-	-	-	5.020	5.020	5.020	5.020	5.020
320	-	-	-	-	-	5.020	5.020	5.020	5.020	5.020
325	-	-	-	-	-	5.020	5.020	5.020	5.020	5.020

Thickness is intumescent only.

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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 21 Hempacore ONE 43600 and FD 43601 RHS 75 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
50	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
55	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236	0.236
60	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
65	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	0.236
70	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
75	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
80	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
85	-	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
90	-	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
95	-	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
100	-	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
105	-	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
110	-	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940
115	-	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940
120	-	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940
125	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
130	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
135	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
140	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
145	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
150	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
155	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940
160	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940
165	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940
170	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940
175	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020	2.940
180	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020	2.940
185	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940
190	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940
195	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020
200	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020
205	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020
210	-	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020
215	-	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020
220	-	-	-	-	-	5.020	5.020	5.020	5.020	5.020
225	-	-	-	-	-	5.020	5.020	5.020	5.020	5.020
230	-	-	-	-	-	5.020	5.020	5.020	5.020	5.020
235	-	-	-	-	-	-	5.020	5.020	5.020	5.020
240	-	-	-	-	-	-	5.020	5.020	5.020	5.020
245	-	-	-	-	-	-	5.020	5.020	5.020	5.020
250	-	-	-	-	-	-	5.020	5.020	5.020	5.020
255	-	-	-	-	-	-	5.020	5.020	5.020	5.020
260	-	-	-	-	-	-	5.020	5.020	5.020	5.020
265	-	-	-	-	-	-	-	5.020	5.020	5.020
270	-	-	-	-	-	-	-	5.020	5.020	5.020
275	-	-	-	-	-	-	-	5.020	5.020	5.020
280	-	-	-	-	-	-	-	5.020	5.020	5.020
285	-	-	-	-	-	-	-	5.020	5.020	5.020
290	-	-	-	-	-	-	-	5.020	5.020	5.020
295	-	-	-	-	-	-	-	-	5.020	5.020
300	-	-	-	-	-	-	-	-	5.020	5.020
305	-	-	-	-	-	-	-	-	5.020	5.020
310	-	-	-	-	-	-	-	-	5.020	5.020
315	-	-	-	-	-	-	-	-	5.020	5.020
320	-	-	-	-	-	-	-	-	5.020	5.020
325	-	-	-	-	-	-	-	-	-	5.020

Thickness is intumescent only.

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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 22 Hempacore ONE 43600 and FD 43601 RHS 90 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
50	-	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
55	-	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
60	-	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
65	-	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
70	-	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
75	-	-	2.940	2.940	2.940	2.940	2.940	2.940	2.940	2.940
80	-	-	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
85	-	-	5.020	2.940	2.940	2.940	2.940	2.940	2.940	2.940
90	-	-	5.020	5.020	2.940	2.940	2.940	2.940	2.940	2.940
95	-	-	5.020	5.020	5.020	2.940	2.940	2.940	2.940	2.940
100	-	-	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
105	-	-	5.020	5.020	5.020	5.020	2.940	2.940	2.940	2.940
110	-	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
115	-	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
120	-	-	5.020	5.020	5.020	5.020	5.020	2.940	2.940	2.940
125	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940
130	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940	2.940
135	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020	2.940
140	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020	2.940
145	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	2.940
150	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020
155	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020	5.020
160	-	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020
165	-	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020
170	-	-	-	-	-	5.020	5.020	5.020	5.020	5.020
175	-	-	-	-	-	5.020	5.020	5.020	5.020	5.020
180	-	-	-	-	-	-	5.020	5.020	5.020	5.020
185	-	-	-	-	-	-	5.020	5.020	5.020	5.020
190	-	-	-	-	-	-	5.020	5.020	5.020	5.020
195	-	-	-	-	-	-	5.020	5.020	5.020	5.020
200	-	-	-	-	-	-	-	5.020	5.020	5.020
205	-	-	-	-	-	-	-	5.020	5.020	5.020
210	-	-	-	-	-	-	-	5.020	5.020	5.020
215	-	-	-	-	-	-	-	5.020	5.020	5.020
220	-	-	-	-	-	-	-	5.020	5.020	5.020
225	-	-	-	-	-	-	-	-	5.020	5.020
230	-	-	-	-	-	-	-	-	5.020	5.020
235	-	-	-	-	-	-	-	-	5.020	5.020
240	-	-	-	-	-	-	-	-	5.020	5.020
245	-	-	-	-	-	-	-	-	5.020	5.020
250	-	-	-	-	-	-	-	-	-	5.020
255	-	-	-	-	-	-	-	-	-	5.020
260	-	-	-	-	-	-	-	-	-	5.020
265	-	-	-	-	-	-	-	-	-	5.020
270	-	-	-	-	-	-	-	-	-	-
275	-	-	-	-	-	-	-	-	-	-
280	-	-	-	-	-	-	-	-	-	-
285	-	-	-	-	-	-	-	-	-	-
290	-	-	-	-	-	-	-	-	-	-
295	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-
305	-	-	-	-	-	-	-	-	-	-
310	-	-	-	-	-	-	-	-	-	-
315	-	-	-	-	-	-	-	-	-	-
320	-	-	-	-	-	-	-	-	-	-
325	-	-	-	-	-	-	-	-	-	-

Thickness is intumescent only.

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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 23 Hempacore ONE 43600 and FD 43601 RHS 105 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
50	-	-	-	-	2.940	2.940	2.940	2.940	2.940	2.940
55	-	-	-	-	2.940	2.940	2.940	2.940	2.940	2.940
60	-	-	-	-	2.940	2.940	2.940	2.940	2.940	2.940
65	-	-	-	-	2.940	2.940	2.940	2.940	2.940	2.940
70	-	-	-	-	2.940	2.940	2.940	2.940	2.940	2.940
75	-	-	-	-	2.940	2.940	2.940	2.940	2.940	2.940
80	-	-	-	-	5.020	2.940	2.940	2.940	2.940	2.940
85	-	-	-	-	5.020	5.020	2.940	2.940	2.940	2.940
90	-	-	-	-	5.020	5.020	2.940	2.940	2.940	2.940
95	-	-	-	-	5.020	5.020	5.020	2.940	2.940	2.940
100	-	-	-	-	5.020	5.020	5.020	5.020	2.940	2.940
105	-	-	-	-	5.020	5.020	5.020	5.020	2.940	2.940
110	-	-	-	-	5.020	5.020	5.020	5.020	2.940	2.940
115	-	-	-	-	5.020	5.020	5.020	5.020	5.020	2.940
120	-	-	-	-	5.020	5.020	5.020	5.020	5.020	2.940
125	-	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020
130	-	-	-	-	5.020	5.020	5.020	5.020	5.020	5.020
135	-	-	-	-	-	5.020	5.020	5.020	5.020	5.020
140	-	-	-	-	-	5.020	5.020	5.020	5.020	5.020
145	-	-	-	-	-	-	5.020	5.020	5.020	5.020
150	-	-	-	-	-	-	5.020	5.020	5.020	5.020
155	-	-	-	-	-	-	5.020	5.020	5.020	5.020
160	-	-	-	-	-	-	5.020	5.020	5.020	5.020
165	-	-	-	-	-	-	-	5.020	5.020	5.020
170	-	-	-	-	-	-	-	5.020	5.020	5.020
175	-	-	-	-	-	-	-	5.020	5.020	5.020
180	-	-	-	-	-	-	-	-	5.020	5.020
185	-	-	-	-	-	-	-	-	5.020	5.020
190	-	-	-	-	-	-	-	-	5.020	5.020
195	-	-	-	-	-	-	-	-	5.020	5.020
200	-	-	-	-	-	-	-	-	-	5.020
205	-	-	-	-	-	-	-	-	-	5.020
210	-	-	-	-	-	-	-	-	-	5.020
215	-	-	-	-	-	-	-	-	-	5.020
220	-	-	-	-	-	-	-	-	-	-
225	-	-	-	-	-	-	-	-	-	-
230	-	-	-	-	-	-	-	-	-	-
235	-	-	-	-	-	-	-	-	-	-
240	-	-	-	-	-	-	-	-	-	-
245	-	-	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-	-	-
255	-	-	-	-	-	-	-	-	-	-
260	-	-	-	-	-	-	-	-	-	-
265	-	-	-	-	-	-	-	-	-	-
270	-	-	-	-	-	-	-	-	-	-
275	-	-	-	-	-	-	-	-	-	-
280	-	-	-	-	-	-	-	-	-	-
285	-	-	-	-	-	-	-	-	-	-
290	-	-	-	-	-	-	-	-	-	-
295	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-
305	-	-	-	-	-	-	-	-	-	-
310	-	-	-	-	-	-	-	-	-	-
315	-	-	-	-	-	-	-	-	-	-
320	-	-	-	-	-	-	-	-	-	-
325	-	-	-	-	-	-	-	-	-	-

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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 24 Hempacore ONE 43600 and FD 43601 CHS 15 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
45	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
50	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
55	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
60	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
65	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
70	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
75	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
80	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
85	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
90	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
95	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
100	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
105	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
110	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
115	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
120	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
125	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
130	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
135	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
140	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
145	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
150	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
155	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
160	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
165	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
170	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
175	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
180	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
185	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
190	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
195	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
200	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
205	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
210	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
215	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
220	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
225	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
230	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
235	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
240	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
245	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
250	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
255	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
260	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
265	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
270	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
275	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
280	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267
285	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267
290	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267
295	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267
300	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267
305	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267
310	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267
315	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267
320	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267

Thickness is intumescent only.

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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 25 Hempacore ONE 43600 and FD 43601 CHS 30 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
45	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
50	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
55	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
60	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
65	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
70	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
75	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
80	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
85	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
90	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267
95	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267
100	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267
105	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267
110	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267
115	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267
120	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267
125	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267
130	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267
135	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267
140	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267
145	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267
150	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267
155	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267
160	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267
165	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267
170	5.341	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267
175	5.341	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267
180	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
185	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
190	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
195	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
200	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
205	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
210	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
215	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
220	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
225	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
230	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
235	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
240	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
245	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
250	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
255	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
260	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
265	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
270	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
275	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
280	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
285	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
290	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
295	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
300	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
305	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
310	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
315	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
320	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927

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HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 26 Hempacore ONE 43600 and FD 43601 CHS 45 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
45	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
50	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267	0.267	0.267
55	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267	0.267
60	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267
65	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267
70	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267
75	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267
80	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267
85	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
90	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
95	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
100	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
105	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
110	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
115	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
120	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
125	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
130	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
135	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
140	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
145	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
150	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
155	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
160	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
165	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
170	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
175	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
180	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
185	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
190	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
195	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
200	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927
205	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927
210	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927
215	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927
220	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927
225	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927
230	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927
235	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927
240	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927
245	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927
250	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
255	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
260	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
265	-	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
270	-	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
275	-	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
280	-	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
285	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
290	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
295	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
300	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
305	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
310	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
315	-	-	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
320	-	-	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927

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Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 27 Hempacore ONE 43600 and FD 43601 CHS 60 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
45	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267	0.267
50	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267	0.267
55	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
60	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
65	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
70	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
75	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
80	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
85	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
90	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
95	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
100	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
105	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
110	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
115	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
120	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
125	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
130	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927
135	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927
140	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927
145	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927
150	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927
155	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
160	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
165	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
170	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
175	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
180	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
185	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
190	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
195	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927
200	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927
205	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927
210	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927
215	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927
220	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
225	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
230	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
235	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
240	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
245	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
250	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
255	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
260	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
265	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
270	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
275	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
280	-	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341
285	-	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341
290	-	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341
295	-	-	-	-	5.341	5.341	5.341	5.341	5.341	5.341
300	-	-	-	-	-	5.341	5.341	5.341	5.341	5.341
305	-	-	-	-	-	5.341	5.341	5.341	5.341	5.341
310	-	-	-	-	-	-	5.341	5.341	5.341	5.341
315	-	-	-	-	-	-	5.341	5.341	5.341	5.341
320	-	-	-	-	-	-	5.341	5.341	5.341	5.341

Thickness is intumescent only.

Issued: 23rd December 2014
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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 28 Hempacore ONE 43600 and FD 43601 CHS 75 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
45	-	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267	0.267
50	-	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	0.267
55	-	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
60	-	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
65	-	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
70	-	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
75	-	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
80	-	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
85	-	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
90	-	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
95	-	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927
100	-	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927
105	-	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927
110	-	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927
115	-	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
120	-	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
125	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
130	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
135	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
140	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927
145	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927
150	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927
155	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
160	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
165	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
170	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
175	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
180	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
185	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
190	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
195	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
200	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
205	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
210	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
215	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
220	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
225	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
230	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
235	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
240	-	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341
245	-	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341
250	-	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341
255	-	-	-	-	5.341	5.341	5.341	5.341	5.341	5.341
260	-	-	-	-	-	5.341	5.341	5.341	5.341	5.341
265	-	-	-	-	-	-	5.341	5.341	5.341	5.341
270	-	-	-	-	-	-	5.341	5.341	5.341	5.341
275	-	-	-	-	-	-	5.341	5.341	5.341	5.341
280	-	-	-	-	-	-	-	5.341	5.341	5.341
285	-	-	-	-	-	-	-	5.341	5.341	5.341
290	-	-	-	-	-	-	-	5.341	5.341	5.341
295	-	-	-	-	-	-	-	-	5.341	5.341
300	-	-	-	-	-	-	-	-	5.341	5.341
305	-	-	-	-	-	-	-	-	5.341	5.341
310	-	-	-	-	-	-	-	-	-	5.341
315	-	-	-	-	-	-	-	-	-	5.341
320	-	-	-	-	-	-	-	-	-	-

Thickness is intumescent only.

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Reissued: 16th January 2020
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CERTIFICATE No CF 5290
HEMPEL PAINTS (EMIRATES) LLC

Hempacore ONE 43600 and Hempacore ONE FD 43601

Table 29 Hempacore ONE 43600 and FD 43601 CHS 90 minutes										
Required Thickness (mm) for a Design Temperature (°C)										
Section Factor (m-1)	350	400	450	500	520	550	600	650	700	750
45	-	-	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
50	-	-	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
55	-	-	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
60	-	-	2.927	2.927	2.927	2.927	2.927	2.927	2.927	2.927
65	-	-	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
70	-	-	5.341	2.927	2.927	2.927	2.927	2.927	2.927	2.927
75	-	-	5.341	5.341	2.927	2.927	2.927	2.927	2.927	2.927
80	-	-	5.341	5.341	5.341	2.927	2.927	2.927	2.927	2.927
85	-	-	5.341	5.341	5.341	5.341	2.927	2.927	2.927	2.927
90	-	-	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
95	-	-	5.341	5.341	5.341	5.341	5.341	2.927	2.927	2.927
100	-	-	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
105	-	-	5.341	5.341	5.341	5.341	5.341	5.341	2.927	2.927
110	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927
115	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	2.927
120	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
125	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
130	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
135	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
140	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
145	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
150	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
155	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
160	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
165	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
170	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
175	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
180	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
185	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
190	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
195	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
200	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
205	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341	5.341
210	-	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341
215	-	-	-	5.341	5.341	5.341	5.341	5.341	5.341	5.341
220	-	-	-	-	5.341	5.341	5.341	5.341	5.341	5.341
225	-	-	-	-	-	5.341	5.341	5.341	5.341	5.341
230	-	-	-	-	-	5.341	5.341	5.341	5.341	5.341
235	-	-	-	-	-	-	5.341	5.341	5.341	5.341
240	-	-	-	-	-	-	5.341	5.341	5.341	5.341
245	-	-	-	-	-	-	-	5.341	5.341	5.341
250	-	-	-	-	-	-	-	5.341	5.341	5.341
255	-	-	-	-	-	-	-	5.341	5.341	5.341
260	-	-	-	-	-	-	-	-	5.341	5.341
265	-	-	-	-	-	-	-	-	5.341	5.341
270	-	-	-	-	-	-	-	-	-	5.341
275	-	-	-	-	-	-	-	-	-	5.341
280	-	-	-	-	-	-	-	-	-	-
285	-	-	-	-	-	-	-	-	-	-
290	-	-	-	-	-	-	-	-	-	-
295	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-
305	-	-	-	-	-	-	-	-	-	-
310	-	-	-	-	-	-	-	-	-	-
315	-	-	-	-	-	-	-	-	-	-
320	-	-	-	-	-	-	-	-	-	-

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