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## CERTIFICATE OF APPROVAL

### No CF 445

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

## NULLIFIRE LIMITED

**Torrington Avenue, Coventry, West Midlands, CV4 9TJ**  
**Tel: 0247 685 5000 Fax: 0247 646 9547**

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

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**CERTIFIED PRODUCT**  
**NULLIFIRE S707-60**

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

**Signed and sealed for and on behalf of Exova (UK) Limited trading as**  
**Warrington Certification**



**Sir Ken Knight**  
**Chairman**  
**Impartiality Committee**



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

Issued: 13<sup>th</sup> April 2006  
Reissued: 29<sup>th</sup> March 2017  
Valid to: 1<sup>st</sup> July 2018



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#### NULLIFIRE S707-60

1. This approval relates to the use of NULLIFIRE S707-60 for the fire protection of I-shaped and hollow steel sections. The precise scope is given in Tables 1 to 4 which show the total dry film thickness of NULLIFIRE S707-60 (excluding primer and top sealer) required to provide fire resistance periods in accordance with BS476: Part 21: 1987 of 30 minutes up to 90 minutes for differing sections and section factors (A/V).
2. This certification is designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), Section D of the Technical Standards (Scotland), Technical Booklet E (N. Ireland). If compliance is required to other regulatory or guidance documents there may be additional considerations or conflict to be taken into account.'
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 are applicable to steel sections blast cleaned to Swedish Standard Sa 2.5 or equivalent and primed with a suitable and compatible primer. Specifications of surface preparations, primers and top sealers is available from Nullifire Limited whose responsibility is to ensure that NULLIFIRE S707-60 is compatible for use in respect of both ambient and fire conditions. The total dry film thickness of primer should not exceed 0.1mm.
6. The data shown is applicable to NULLIFIRE S707-60 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.

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### NULLIFIRE LIMITED

**NULLIFIRE S707-60**

**Table 1**

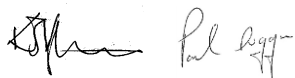
Three Sided Protection to I-Section Beams: 620°C							
30 minutes		60 minutes				90 minutes	
Section factor $m^{-1}$	DFT mm	Section factor $m^{-1}$	DFT mm	Section factor $m^{-1}$	DFT mm	Section factor $m^{-1}$	DFT mm
260	0.201	70	0.207	195	0.383	44	0.208
265	0.204	71	0.208	200	0.390	50	0.250
270	0.208	75	0.214	205	0.397	55	0.284
275	0.212	80	0.221	210	0.404	60	0.319
280	0.215	85	0.228	215	0.412	65	0.354
285	0.219	90	0.235	220	0.419	70	0.388
290	0.222	95	0.242	225	0.426	75	0.423
295	0.226	100	0.249	230	0.433	80	0.441
300	0.230	105	0.256	235	0.441	85	0.448
305	0.233	110	0.263	240	0.450	90	0.455
310	0.237	115	0.270	245	0.460	95	0.462
315	0.240	120	0.277	250	0.469	100	0.469
320	0.244	125	0.284	255	0.478	105	0.476
		130	0.291	260	0.488	110	0.483
		135	0.298	265	0.497	115	0.490
		140	0.306	270	0.507	120	0.497
		145	0.313	275	0.516	125	0.504
		150	0.320	280	0.526	130	0.511
		155	0.327	285	0.535	135	0.518
		160	0.334	290	0.544	140	0.525
		165	0.341	295	0.554	145	0.532
		170	0.348	300	0.563	150	0.539
		175	0.355	305	0.573	155	0.546
		180	0.362	310	0.582	160	0.553
		185	0.369	315	0.592	165	0.560
		190	0.376	320	0.601	170	0.567
						175	0.574
						180	0.581

DFT is intumescent thickness only.

Table applies to beams with concrete slab.

Additional results tables for a range of steel design temperatures are also available. Consult manufacturer.

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**NULLIFIRE S707-60**

**Table 2**

Four Sided Protection to I-Section Columns and Beams: 550°C							
30 minutes		60 minutes				90 minutes	
Section factor m <sup>-1</sup>	DFT mm	Section factor m <sup>-1</sup>	DFT mm	Section factor m <sup>-1</sup>	DFT mm	Section factor m <sup>-1</sup>	DFT mm
225	0.205	55	0.200	190	0.549	40	0.230
230	0.212	60	0.212	195	0.562	45	0.262
235	0.218	65	0.225	200	0.575	50	0.295
240	0.225	67	0.230	205	0.593	55	0.327
244	0.230	70	0.238	210	0.614	60	0.360
250	0.238	75	0.251	215	0.635	65	0.392
255	0.244	80	0.264	220	0.656	70	0.424
260	0.251	85	0.277	225	0.678	75	0.457
265	0.257	90	0.290	230	0.699	80	0.489
270	0.264	95	0.303	235	0.720	85	0.522
275	0.270	100	0.316	240	0.779	90	0.554
280	0.277	105	0.329	245	0.838	95	0.592
285	0.283	110	0.341	250	0.897	100	0.652
290	0.290	115	0.354	255	0.956	105	0.713
295	0.296	120	0.367	260	1.015	110	0.773
300	0.303	125	0.380	265	1.063	115	0.833
305	0.309	130	0.393	270	1.094	120	0.893
310	0.316	135	0.406	275	1.125	125	0.954
315	0.322	140	0.419	280	1.156	130	1.014
320	0.329	145	0.432	285	1.188	135	1.074
		150	0.445	290	1.219	140	1.134
		155	0.458	295	1.250	145	1.195
		160	0.471	300	1.281	150	1.255
		165	0.484	305	1.313	155	1.315
		170	0.497	310	1.344	160	1.375
		175	0.510	315	1.375	165	1.436
		180	0.523	320	1.406		
		185	0.536				

DFT is intumescent thickness only.

Table applicable to 4 sided beams up to 1.375 mm.

Additional results tables for a range of steel design temperatures are also available. Consult manufacturer.

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**Table 3**

Rectangular Hollow Section Columns: 520°C					
30 minutes		60 minutes		90 minutes	
Section factor m <sup>-1</sup>	Thickness mm	Section factor m <sup>-1</sup>	Thickness mm	Section factor m <sup>-1</sup>	Thickness mm
252	0.37	95	0.37	40	0.69
255	0.38	98	0.42	60	1.03
260	0.41	100	0.45	98	1.53
263	0.42	105	0.53		
270	0.45	110	0.61		
275	0.48	115	0.70		
280	0.50	120	0.78		
285	0.53	125	0.86		
290	0.55	130	0.94		
295	0.58	135	1.02		
300	0.60	140	1.07		
305	0.63	145	1.11		
310	0.65	150	1.16		
315	0.68	155	1.21		
320	0.70	160	1.26		
		165	1.30		
		170	1.35		
		175	1.40		
		180	1.45		
		185	1.49		
		190	1.54		
		195	1.59		
		200	1.63		
		205	1.68		

Thickness is intumescent only.

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**Table 4**

Circular Hollow Section Columns: 520°C			
30 minutes		60 minutes	
Section factor m <sup>-1</sup>	Thickness mm	Section factor m <sup>-1</sup>	Thickness mm
200	0.37	40	0.55
205	0.39	45	0.58
210	0.44	50	0.61
215	0.48	55	0.64
220	0.52	60	0.67
225	0.57	65	0.70
230	0.61	70	0.74
235	0.65	75	0.77
240	0.69	80	0.80
245	0.74	85	0.83
250	0.78	90	0.86
255	0.82	95	0.89
260	0.87	100	0.93
265	0.91	105	0.96
270	0.95	110	0.99
275	0.99	115	1.02
280	1.08	120	1.15
285	1.24	125	1.28
290	1.40	130	1.40
295	1.56	135	1.53
298	1.66	140	1.66
		141	1.68

Thickness is intumescent only.