
CERTIFICATE OF APPROVAL

No CF 5570

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

PROMAT FIRE PROTECTION LLC

PO Box 123945, Dubai, UAE
Tel: +971 4 885 3070

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

Promat Fire Protection LLC
Caeco FENDOLITE[®] MII & Caeco
FENDOLITE[®] TG

TECHNICAL SCHEDULE

TS14 – Board/Spray Protection
for Steelwork

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



Paul Duggan
Certification Manager



Issued:
Valid to:

6th September 2017
8th July 2018

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PROMAT FIRE PROTECTION LLC

Promat Fire Protection LLC – Cafco FENDOLITE[®] MII & Cafco FENDOLITE[®] TG

1. This approval relates to the use of Cafco FENDOLITE[®] MII & Cafco FENDOLITE[®] TG for the fire protection to structural steel sections. The precise scope is given in Table 1 to Table 9 which show the total thickness of Cafco FENDOLITE[®] MII or Cafco FENDOLITE[®] TG required to provide fire resistance periods in accordance with BS476: Part 21: 1987 of 30 minutes up to 240 minutes for differing sections and section factors at specific design temperatures.
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 TS14
 - iii) Certification of quality management system to ISO 9001:2008
 - iv) Inspection and surveillance of factory production control
 - v) Audit testing
4. The data shown is applicable for I-section beams and columns, RSJ's, structural tees, rolled tees, angles and channels. For CHS sections, RHS sections, cellular beams and castellated sections the guidance contained in 'Fire protection for structural steel in buildings – 4th Edition', must be followed. This may involve modifications to the section factor of the steel section or to the protection thickness or both.
5. This approval is applicable to structural steel sections with the depth up to 686mm and the width up to 325mm. In the case of deep web (where the web depth between the flanges exceeds 650mm) or wide flange (where the flange width exceeds 325mm) sections, 'in-depth' reinforcement in the form of a corrosion protected wire mesh, typically 25, 38 or 50mm x 0.9mm, must be included. The mesh should preferably be positioned in the middle third of the protection thickness and be retained by steel welded pins and non-return washers at nominal 500mm centres. The minimum practical thickness of the protection for the inclusion of the steel mesh is 15mm. The guidance contained in 'Fire protection for structural steel in buildings – 4th Edition', must be followed.
6. Specifications of surface preparations, primers and top sealer is available from Promat Fire Protection LLC whose responsibility is to ensure that Cafco FENDOLITE[®] MII & Cafco FENDOLITE[®] TG is compatible for use in respect of both ambient and fire conditions.

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7. The data shown is applicable to Cafco FENDOLITE[®] MII (spray applied) & Cafco FENDOLITE[®] TG (trowel applied) to horizontal, vertical, flexural and compression members supporting loads up to the maximum design loads specified in BS449: Part 2.
8. 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.
9. 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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Table 1

Beams & Columns at Critical Steel Temperature of 350°C						
Section Factor A/V (m ⁻¹)	Thickness (mm)					
	Fire resistance period (mins)					
	30	60	90	120	180	240
30	8	11	16	21	31	40
40	8	13	19	24	36	47
50	8	15	21	27	40	52
60	9	16	22	29	43	56
70	10	17	24	31	45	59 ¹
80	10	17	25	32	47	
90	10	18	26	34	49	
100	11	19	27	35	50	
110	11	19	27	35	52	
120	11	20	28	36	53	
130	11	20	28	37	54	
140	12	20	29	37	55	
150	12	20	29	38	55	
160	12	21	30	38	56	
170	12	21	30	39	57	
180	12	21	30	39	57	
190	12	21	31	40	58	
200	12	22	31	40	58	
210	12	22	31	40		
220	13	22	31	41		
230	13	22	31	41		
240	13	22	32	41		
250	13	22	32	41		
260	13	22	32	42		
270	13	23	32	42		
280	13	23	32	42		
290	13	23	32	42		
300	13	23	32	42		
310	13	23	33	42		

Note 1: Maximum thickness of 58mm if intermediate values are interpolated

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Table 2

Beams & Columns at Critical Steel Temperature of 400°C						
Section Factor A/V (m ⁻¹)	Thickness (mm)					
	Fire resistance period (mins)					
	30	60	90	120	180	240
30	8	9	14	18	26	35
40	8	11	16	21	31	41
50	8	13	18	24	35	46
60	8	14	20	26	38	50
70	8	15	21	28	41	53
80	9	15	22	29	43	56
90	9	16	23	30	45	59 ¹
100	9	17	24	31	46	
110	10	17	25	32	48	
120	10	18	25	33	49	
130	10	18	26	34	50	
140	10	18	26	35	51	
150	10	19	27	35	52	
160	11	19	27	36	52	
170	11	19	28	36	53	
180	11	19	28	37	54	
190	11	20	28	37	54	
200	11	20	29	37	55	
210	11	20	29	38	55	
220	11	20	29	38	56	
230	11	20	29	38	56	
240	11	20	30	39	57	
250	11	21	30	39	57	
260	12	21	30	39	57	
270	12	21	30	39	58	
280	12	21	30	40	58	
290	12	21	30	40	58	
300	12	21	31	40		
310	12	21	31	40		

Note 1: Maximum thickness of 58mm if intermediate values are interpolated.

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Table 3

Beams & Columns at Critical Steel Temperature of 450°C						
Section Factor A/V (m ⁻¹)	Thickness (mm)					
	Fire resistance period (mins)					
	30	60	90	120	180	240
30	8	8	11	15	22	30
40	8	9	14	18	27	36
50	8	11	16	21	30	40
60	8	12	17	23	34	44
70	8	13	18	24	36	48
80	8	13	20	26	38	51
90	8	14	21	27	40	53
100	8	15	21	28	42	56
110	8	15	22	29	43	58
120	8	16	23	30	45	
130	9	16	23	31	46	
140	9	16	24	32	47	
150	9	17	25	32	48	
160	9	17	25	33	49	
170	9	17	25	33	50	
180	9	18	26	34	50	
190	9	18	26	34	51	
200	10	18	26	35	52	
210	10	18	27	35	52	
220	10	18	27	36	53	
230	10	19	27	36	53	
240	10	19	27	36	54	
250	10	19	28	37	54	
260	10	19	28	37	55	
270	10	19	28	37	55	
280	10	19	28	37	55	
290	10	19	28	38	56	
300	10	19	29	38	56	
310	10	20	29	38	56	

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Table 4

Beams & Columns at Critical Steel Temperature of 500°C						
Section Factor A/V (m ⁻¹)	Thickness (mm)					
	Fire resistance period (mins)					
	30	60	90	120	180	240
30	8	8	10	13	19	26
40	8	8	12	16	24	31
50	8	9	13	18	27	36
60	8	10	15	20	30	40
70	8	11	16	22	32	43
80	8	11	17	23	35	46
90	8	12	18	24	36	49
100	8	13	19	25	38	51
110	8	13	20	26	40	53
120	8	13	20	27	41	55
130	8	14	21	28	42	56
140	8	14	21	29	43	58
150	8	15	22	29	44	
160	8	15	22	30	45	
170	8	15	23	31	46	
180	8	15	23	31	47	
190	8	16	24	31	47	
200	8	16	24	32	48	
210	8	16	24	32	49	
220	8	16	24	33	49	
230	8	16	25	33	50	
240	8	16	25	33	50	
250	8	17	25	34	51	
260	8	17	25	34	51	
270	8	17	26	34	52	
280	8	17	26	34	52	
290	8	17	26	35	52	
300	8	17	26	35	53	
310	8	17	26	35	53	



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Table 5

Beams & Columns at Critical Steel Temperature of 550°C						
Section Factor A/V (m ⁻¹)	Thickness (mm)					
	Fire resistance period (mins)					
	30	60	90	120	180	240
30	8	8	8	11	17	23
40	8	8	10	14	21	28
50	8	8	11	16	24	32
60	8	8	13	17	27	36
70	8	9	14	19	29	39
80	8	10	15	20	31	42
90	8	10	16	22	33	44
100	8	11	17	23	35	47
110	8	11	17	24	36	49
120	8	12	18	24	37	50
130	8	12	19	25	39	52
140	8	12	19	26	40	53
150	8	13	20	27	41	55
160	8	13	20	27	42	56
170	8	13	20	28	42	57
180	8	13	21	28	43	58
190	8	14	21	29	44	
200	8	14	21	29	45	
210	8	14	22	30	45	
220	8	14	22	30	46	
230	8	14	22	30	46	
240	8	14	23	31	47	
250	8	15	23	31	47	
260	8	15	23	31	48	
270	8	15	23	32	48	
280	8	15	23	32	49	
290	8	15	24	32	49	
300	8	15	24	32	49	
310	8	15	24	33	50	

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Table 6

Beams & Columns at Critical Steel Temperature of 600°C						
Section Factor A/V (m ⁻¹)	Thickness (mm)					
	Fire resistance period (mins)					
	30	60	90	120	180	240
30	8	8	8	9	14	19
40	8	8	8	11	18	24
50	8	8	10	13	21	28
60	8	8	11	15	23	32
70	8	8	12	16	26	35
80	8	8	13	18	28	37
90	8	8	14	19	29	40
100	8	9	14	20	31	42
110	8	9	15	21	33	44
120	8	10	16	22	34	46
130	8	10	16	23	35	48
140	8	10	17	23	36	49
150	8	11	17	24	37	51
160	8	11	18	25	38	52
170	8	11	18	25	39	53
180	8	11	19	26	40	54
190	8	12	19	26	41	55
200	8	12	19	27	42	56
210	8	12	20	27	42	57
220	8	12	20	28	43	58
230	8	12	20	28	43	
240	8	13	20	28	44	
250	8	13	21	29	45	
260	8	13	21	29	45	
270	8	13	21	29	46	
280	8	13	21	30	46	
290	8	13	22	30	46	
300	8	13	22	30	47	
310	8	13	22	30	47	



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Table 7

Beams & Columns at Critical Steel Temperature of 620°C						
Section Factor A/V (m ⁻¹)	Thickness (mm)					
	Fire resistance period (mins)					
	30	60	90	120	180	240
30	8	8	8	9	13	18
40	8	8	8	11	17	23
50	8	8	9	12	20	27
60	8	8	10	14	22	30
70	8	8	11	16	24	33
80	8	8	12	17	26	36
90	8	8	13	18	28	38
100	8	8	14	19	30	40
110	8	9	14	20	31	42
120	8	9	15	21	32	44
130	8	9	15	22	34	46
140	8	10	16	22	35	47
150	8	10	16	23	36	49
160	8	10	17	24	37	50
170	8	10	17	24	38	51
180	8	11	18	25	39	52
190	8	11	18	25	39	54
200	8	11	18	26	40	55
210	8	11	19	26	41	55
220	8	11	19	26	41	56
230	8	12	19	27	42	57
240	8	12	19	27	43	58
250	8	12	20	28	43	
260	8	12	20	28	44	
270	8	12	20	28	44	
280	8	12	20	28	44	
290	8	12	21	29	45	
300	8	13	21	29	45	
310	8	13	21	29	46	

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Table 8

Beams & Columns at Critical Steel Temperature of 650°C						
Section Factor A/V (m ⁻¹)	Thickness (mm)					
	Fire resistance period (mins)					
	30	60	90	120	180	240
30	8	8	8	8	12	16
40	8	8	8	10	15	21
50	8	8	8	11	18	24
60	8	8	9	13	20	27
70	8	8	10	14	22	30
80	8	8	11	15	24	33
90	8	8	12	16	26	35
100	8	8	12	17	28	38
110	8	8	13	18	29	40
120	8	8	14	19	30	41
130	8	9	14	20	32	43
140	8	9	15	21	33	45
150	8	9	15	21	34	46
160	8	9	16	22	35	47
170	8	10	16	23	36	49
180	8	10	17	23	37	50
190	8	10	17	24	37	51
200	8	10	17	24	38	52
210	8	10	18	25	39	53
220	8	11	18	25	39	54
230	8	11	18	25	40	55
240	8	11	18	26	41	56
250	8	11	19	26	41	56
260	8	11	19	27	42	57
270	8	11	19	27	42	58
280	8	12	19	27	43	58
290	8	12	20	27	43	
300	8	12	20	28	44	
310	8	12	20	28	44	



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Table 9

Beams & Columns at Critical Steel Temperature of 700°C						
Section Factor A/V (m ⁻¹)	Thickness (mm)					
	Fire resistance period (mins)					
	30	60	90	120	180	240
30	8	8	8	8	10	14
40	8	8	8	8	13	17
50	8	8	8	9	15	20
60	8	8	8	11	17	23
70	8	8	8	12	19	26
80	8	8	9	13	21	29
90	8	8	10	14	22	31
100	8	8	10	15	24	33
110	8	8	11	16	25	35
120	8	8	12	17	27	37
130	8	8	12	17	28	38
140	8	8	13	18	29	40
150	8	8	13	19	30	41
160	8	8	13	19	31	42
170	8	8	14	20	32	44
180	8	8	14	20	33	45
190	8	8	15	21	33	46
200	8	8	15	21	34	47
210	8	9	15	22	35	48
220	8	9	15	22	36	49
230	8	9	16	23	36	50
240	8	9	16	23	37	51
250	8	9	16	23	37	52
260	8	9	16	24	38	52
270	8	9	17	24	39	53
280	8	10	17	24	39	54
290	8	10	17	25	40	54
300	8	10	17	25	40	55
310	8	10	18	25	40	56