
CERTIFICATE OF APPROVAL

No CF 384

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

SHERWIN WILLIAMS PROTECTIVE AND MARINE

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

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

CERTIFIED PRODUCT

Firetex FX7000
Firetex FX8000

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: 13th January 2006
Reissued: 31st January 2017
Valid to: 30th June 2019

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CERTIFICATE No CF 384

SHERWIN WILLIAMS PROTECTIVE AND MARINE

Firetex FX7000/FX8000

1. This approval relates to the use of Firetex FX7000 and FX8000 for the fire protection of I-shaped and hollow steel sections. The precise scope is given in Tables 1 to 5 which show the total dry film thickness of Firetex FX7000 and FX8000 (excluding primer and top sealer) required to provide fire resistance periods in accordance with BS476: Part 21: 1987 of 30 minutes up to 120 minutes for differing sections and section factors.
2. This certification is designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), Section 2 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 ISO 8501-1 SA2¹/₂ or equivalent and primed with a suitable and compatible primer. Specifications of surface preparations, primers and top sealers is available from Sherwin-Williams/Leighs Paints whose responsibility is to ensure that Firetex FX7000 and FX8000 is compatible for use in respect of both ambient and fire conditions. The total dry film thickness of primer should not exceed that tested.
6. The data shown is applicable to Firetex FX7000 and FX8000 applied by spray to horizontal, vertical, flexural and compression members supporting loads up to the maximum design loads specified in BS449: Part 2. For other design temperatures see manufacturer for details.
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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Firetex FX7000/FX8000

Table 1

| I-Section Beams (3-Sided protection): 620°C | | | | | | | | | |
|---|--------------|--------------------------------------|--------------|--------------------------------------|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 30 minutes | | 45 minutes | | | | 60 minutes | | | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 330 | 0.300 | 135 | 0.300 | 235 | 0.624 | 70 | 0.300 | 205 | 1.023 |
| | | 140 | 0.316 | 240 | 0.632 | 75 | 0.314 | 210 | 1.046 |
| | | 145 | 0.339 | 245 | 0.639 | 80 | 0.355 | 215 | 1.081 |
| | | 150 | 0.363 | 250 | 0.647 | 85 | 0.396 | 220 | 1.134 |
| | | 155 | 0.386 | 255 | 0.654 | 90 | 0.437 | 225 | 1.186 |
| | | 160 | 0.410 | 260 | 0.662 | 95 | 0.478 | 230 | 1.239 |
| | | 165 | 0.433 | 265 | 0.669 | 100 | 0.519 | 235 | 1.292 |
| | | 170 | 0.457 | 270 | 0.677 | 105 | 0.560 | 240 | 1.345 |
| | | 175 | 0.480 | 275 | 0.684 | 110 | 0.583 | 245 | 1.397 |
| | | 180 | 0.504 | 280 | 0.692 | 115 | 0.606 | 250 | 1.450 |
| | | 185 | 0.527 | 285 | 0.699 | 120 | 0.629 | 255 | 1.750 |
| | | 190 | 0.551 | 290 | 0.707 | 125 | 0.653 | 260 | 2.050 |
| | | 195 | 0.564 | 295 | 0.714 | 130 | 0.676 | 265 | 2.235 |
| | | 200 | 0.572 | 300 | 0.722 | 135 | 0.699 | 270 | 2.248 |
| | | 205 | 0.579 | 305 | 0.729 | 140 | 0.722 | 275 | 2.260 |
| | | 210 | 0.587 | 310 | 0.737 | 145 | 0.745 | 280 | 2.273 |
| | | 215 | 0.594 | 315 | 0.744 | 150 | 0.768 | 285 | 2.286 |
| | | 220 | 0.602 | 320 | 0.752 | 155 | 0.791 | 290 | 2.298 |
| | | 225 | 0.609 | 325 | 0.759 | 160 | 0.815 | 295 | 2.311 |
| | | 230 | 0.617 | 330 | 0.767 | 165 | 0.838 | 300 | 2.323 |
| | | | | | | 170 | 0.861 | 305 | 2.336 |
| | | | | | | 175 | 0.884 | 310 | 2.349 |
| | | | | | | 180 | 0.907 | 315 | 2.361 |
| | | | | | | 185 | 0.930 | 320 | 2.374 |
| | | | | | | 190 | 0.954 | 325 | 2.386 |
| | | | | | | 195 | 0.977 | 330 | 2.399 |
| | | | | | | 200 | 1.000 | | |

Thickness is intumescent only. Beams to include a concrete slab.

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SHERWIN WILLIAMS PROTECTIVE AND MARINE

Firetex FX7000/FX8000

Table 1 continued

| I-Section Beams (3-Sided protection): 620°C | | | | | | | |
|---|--------------|--------------------------------------|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 75 minutes | | | | 90 minutes | | | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 45 | 0.300 | 190 | 1.502 | 35 | 0.300 | 185 | 2.311 |
| 50 | 0.330 | 195 | 1.762 | 40 | 0.383 | 190 | 2.334 |
| 55 | 0.391 | 200 | 2.022 | 45 | 0.463 | 195 | 2.356 |
| 60 | 0.451 | 205 | 2.233 | 50 | 0.544 | 200 | 2.379 |
| 65 | 0.512 | 210 | 2.250 | 55 | 0.625 | 205 | 2.401 |
| 70 | 0.569 | 215 | 2.266 | 60 | 0.705 | 210 | 2.424 |
| 75 | 0.614 | 220 | 2.283 | 65 | 0.786 | 215 | 2.446 |
| 80 | 0.658 | 225 | 2.299 | 70 | 0.866 | 220 | 2.469 |
| 85 | 0.703 | 230 | 2.316 | 75 | 0.947 | 225 | 2.491 |
| 90 | 0.748 | 235 | 2.332 | 80 | 1.028 | 230 | 2.533 |
| 95 | 0.792 | 240 | 2.349 | 85 | 1.078 | 235 | 2.589 |
| 100 | 0.837 | 245 | 2.365 | 90 | 1.108 | 240 | 2.644 |
| 105 | 0.881 | 250 | 2.381 | 95 | 1.138 | 245 | 2.700 |
| 110 | 0.926 | 255 | 2.398 | 100 | 1.168 | 250 | 2.756 |
| 115 | 0.971 | 260 | 2.414 | 105 | 1.198 | 255 | 2.811 |
| 120 | 1.015 | 265 | 2.431 | 110 | 1.228 | 260 | 2.867 |
| 125 | 1.060 | 270 | 2.447 | 115 | 1.258 | 265 | 2.922 |
| 130 | 1.090 | 275 | 2.464 | 120 | 1.288 | 270 | 2.978 |
| 135 | 1.121 | 280 | 2.480 | 125 | 1.318 | 275 | 3.033 |
| 140 | 1.151 | 285 | 2.497 | 130 | 1.348 | 280 | 3.089 |
| 145 | 1.182 | 290 | 2.534 | 135 | 1.378 | 285 | 3.144 |
| 150 | 1.212 | 295 | 2.577 | 140 | 1.408 | 290 | 3.200 |
| 155 | 1.243 | 300 | 2.619 | 145 | 1.438 | 295 | 3.256 |
| 160 | 1.273 | 305 | 2.662 | 150 | 1.567 | 300 | 3.311 |
| 165 | 1.304 | 310 | 2.704 | 155 | 1.762 | 305 | 3.367 |
| 170 | 1.334 | 315 | 2.747 | 160 | 1.957 | 310 | 3.422 |
| 175 | 1.365 | 320 | 2.789 | 165 | 2.152 | 315 | 3.478 |
| 180 | 1.395 | 325 | 2.832 | 170 | 2.244 | 320 | 3.533 |
| 185 | 1.426 | 330 | 2.874 | 175 | 2.266 | 325 | 3.589 |
| | | | | 180 | 2.289 | 330 | 3.644 |

Thickness is intumescent only. Beams to include a concrete slab.

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SHERWIN WILLIAMS PROTECTIVE AND MARINE

Firetex FX7000/FX8000

Table 1 continued

| I-Section Beams (3-Sided protection): 620°C | | | | | | | |
|---|--------------|--------------------------------------|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 105 minutes | | | | 120 minutes | | | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 25 | 0.300 | 155 | 2.329 | 30 | 0.504 | 130 | 2.280 |
| 30 | 0.351 | 160 | 2.365 | 35 | 0.631 | 135 | 2.353 |
| 35 | 0.455 | 165 | 2.401 | 40 | 0.810 | 140 | 2.427 |
| 40 | 0.560 | 170 | 2.436 | 45 | 0.989 | 145 | 2.500 |
| 45 | 0.692 | 175 | 2.472 | 50 | 1.104 | 150 | 2.583 |
| 50 | 0.823 | 180 | 2.514 | 55 | 1.178 | 155 | 2.667 |
| 55 | 0.955 | 185 | 2.583 | 60 | 1.251 | 160 | 2.750 |
| 60 | 1.067 | 190 | 2.652 | 65 | 1.324 | 165 | 2.833 |
| 65 | 1.103 | 195 | 2.721 | 70 | 1.398 | 170 | 2.917 |
| 70 | 1.138 | 200 | 2.790 | 75 | 1.471 | 175 | 3.000 |
| 75 | 1.173 | 205 | 2.859 | 80 | 1.545 | 180 | 3.083 |
| 80 | 1.209 | 210 | 2.928 | 85 | 1.618 | 185 | 3.167 |
| 85 | 1.244 | 215 | 2.997 | 90 | 1.692 | 195 | 3.333 |
| 90 | 1.280 | 220 | 3.066 | 95 | 1.765 | 200 | 3.417 |
| 95 | 1.315 | 225 | 3.134 | 100 | 1.839 | 205 | 3.500 |
| 100 | 1.351 | 230 | 3.203 | 105 | 1.912 | 210 | 3.583 |
| 105 | 1.386 | 235 | 3.272 | 110 | 1.986 | 215 | 3.667 |
| 110 | 1.422 | 240 | 3.341 | 115 | 2.059 | 220 | 3.750 |
| 115 | 1.479 | 245 | 3.410 | 120 | 2.133 | 225 | 3.833 |
| 120 | 1.623 | 250 | 3.479 | 125 | 2.206 | 230 | 3.917 |
| 125 | 1.768 | 255 | 3.548 | | | | |
| 130 | 1.912 | 260 | 3.617 | | | | |
| 135 | 2.057 | 265 | 3.686 | | | | |
| 140 | 2.201 | 270 | 3.755 | | | | |
| 145 | 2.258 | 275 | 3.824 | | | | |
| 150 | 2.294 | 280 | 3.893 | | | | |

Thickness is intumescent only. Beams to include a concrete slab.

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SHERWIN WILLIAMS PROTECTIVE AND MARINE

Firetex FX7000/FX8000

Table 2

| I-Section Columns and Beams (4-Sided protection): 550°C | | | | | | | | | |
|---|--------------|--------------------------------------|--------------|--------------------------------------|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 30 minutes | | 45 minutes | | | | 60 minutes | | | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 275 | 0.295 | 75 | 0.295 | 205 | 0.439 | 45 | 0.295 | 190 | 0.675 |
| 280 | 0.298 | 80 | 0.301 | 210 | 0.445 | 50 | 0.306 | 195 | 0.685 |
| 285 | 0.304 | 85 | 0.306 | 215 | 0.450 | 55 | 0.327 | 200 | 0.694 |
| 290 | 0.309 | 90 | 0.312 | 220 | 0.456 | 60 | 0.349 | 205 | 0.704 |
| 295 | 0.314 | 95 | 0.317 | 225 | 0.461 | 65 | 0.370 | 210 | 0.713 |
| 300 | 0.320 | 100 | 0.323 | 230 | 0.467 | 70 | 0.391 | 215 | 0.723 |
| 305 | 0.325 | 105 | 0.329 | 235 | 0.472 | 75 | 0.412 | 220 | 0.733 |
| 310 | 0.330 | 110 | 0.334 | 240 | 0.478 | 80 | 0.434 | 225 | 0.742 |
| 315 | 0.336 | 115 | 0.340 | 245 | 0.483 | 85 | 0.455 | 230 | 0.752 |
| 320 | 0.341 | 120 | 0.345 | 250 | 0.489 | 90 | 0.476 | 235 | 0.761 |
| 325 | 0.346 | 125 | 0.351 | 255 | 0.493 | 95 | 0.493 | 240 | 0.771 |
| 330 | 0.352 | 130 | 0.356 | 260 | 0.497 | 100 | 0.502 | 245 | 0.781 |
| | | 135 | 0.362 | 265 | 0.501 | 105 | 0.512 | 250 | 0.790 |
| | | 140 | 0.367 | 270 | 0.505 | 110 | 0.522 | 255 | 0.800 |
| | | 145 | 0.373 | 275 | 0.509 | 115 | 0.531 | 260 | 0.809 |
| | | 150 | 0.378 | 280 | 0.513 | 120 | 0.541 | 265 | 0.819 |
| | | 155 | 0.384 | 285 | 0.516 | 125 | 0.550 | 270 | 0.829 |
| | | 160 | 0.389 | 290 | 0.520 | 130 | 0.560 | 275 | 0.838 |
| | | 165 | 0.395 | 295 | 0.524 | 135 | 0.570 | 280 | 0.848 |
| | | 170 | 0.400 | 300 | 0.528 | 140 | 0.579 | 285 | 0.857 |
| | | 175 | 0.406 | 305 | 0.532 | 145 | 0.589 | 290 | 0.867 |
| | | 180 | 0.412 | 310 | 0.536 | 150 | 0.598 | 295 | 0.877 |
| | | 185 | 0.417 | 315 | 0.540 | 155 | 0.608 | 300 | 0.886 |
| | | 190 | 0.423 | 320 | 0.544 | 160 | 0.618 | 305 | 0.896 |
| | | 195 | 0.428 | 325 | 0.548 | 165 | 0.627 | 310 | 0.905 |
| | | 200 | 0.434 | 330 | 0.552 | 170 | 0.637 | 315 | 0.915 |
| | | | | | | 175 | 0.646 | 320 | 0.925 |
| | | | | | | 180 | 0.656 | 325 | 0.934 |
| | | | | | | 185 | 0.666 | 330 | 0.944 |

Thickness is intumescent only.

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SHERWIN WILLIAMS PROTECTIVE AND MARINE

Firetex FX7000/FX8000

Table 2 continued

| I-Section Columns and Beams (4-Sided protection): 550°C | | | | | | | |
|---|--------------|--------------------------------------|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 75 minutes | | | | 90 minutes | | | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 30 | 0.295 | 180 | 1.336 | 25 | 0.295 | 150 | 2.251 |
| 35 | 0.302 | 185 | 1.378 | 30 | 0.365 | 155 | 2.330 |
| 40 | 0.354 | 190 | 1.420 | 35 | 0.468 | 160 | 2.409 |
| 45 | 0.406 | 195 | 1.461 | 40 | 0.548 | 165 | 2.489 |
| 50 | 0.458 | 200 | 1.503 | 45 | 0.622 | 170 | 2.568 |
| 55 | 0.501 | 205 | 1.545 | 50 | 0.695 | 175 | 2.647 |
| 60 | 0.532 | 210 | 1.586 | 55 | 0.769 | 180 | 2.726 |
| 65 | 0.563 | 215 | 1.628 | 60 | 0.842 | 185 | 2.806 |
| 70 | 0.593 | 220 | 1.670 | 65 | 0.916 | 190 | 2.885 |
| 75 | 0.624 | 225 | 1.711 | 70 | 0.990 | 195 | 2.964 |
| 80 | 0.655 | 230 | 1.753 | 75 | 1.063 | 200 | 3.055 |
| 85 | 0.685 | 235 | 1.997 | 80 | 1.141 | 205 | 3.149 |
| 90 | 0.716 | 240 | 2.543 | 85 | 1.221 | 210 | 3.243 |
| 95 | 0.747 | 245 | 2.995 | 90 | 1.300 | 215 | 3.336 |
| 100 | 0.777 | 250 | 3.072 | 95 | 1.379 | 220 | 3.430 |
| 105 | 0.808 | 255 | 3.148 | 100 | 1.458 | 225 | 3.524 |
| 110 | 0.839 | 260 | 3.224 | 105 | 1.538 | 230 | 3.618 |
| 115 | 0.869 | 265 | 3.300 | 110 | 1.617 | 235 | 3.711 |
| 120 | 0.900 | 270 | 3.377 | 115 | 1.696 | 240 | 3.805 |
| 125 | 0.931 | 275 | 3.453 | 120 | 1.775 | 245 | 3.899 |
| 130 | 0.961 | 280 | 3.529 | 125 | 1.855 | 250 | 3.993 |
| 135 | 0.992 | 285 | 3.605 | 130 | 1.934 | 255 | 4.086 |
| 140 | 1.023 | 290 | 3.682 | 135 | 2.013 | 260 | 4.180 |
| 145 | 1.053 | 295 | 3.758 | 140 | 2.092 | 265 | 4.274 |
| 150 | 1.086 | 300 | 3.834 | 145 | 2.172 | | |
| 155 | 1.128 | 305 | 3.911 | | | | |
| 160 | 1.170 | 310 | 3.987 | | | | |
| 165 | 1.211 | 315 | 4.063 | | | | |
| 170 | 1.253 | 320 | 4.139 | | | | |
| 175 | 1.295 | 325 | 4.216 | | | | |

Thickness is intumescent only. Beams up to protection thickness of 3.920mm.

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SHERWIN WILLIAMS PROTECTIVE AND MARINE

Firetex FX7000/FX8000

Table 2 continued

| I-Section Columns and Beams (4-Sided protection): 550°C | | | | | |
|---|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 105 minutes | | | | 120 minutes | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 35 | 0.970 | 130 | 2.403 | 30 | 0.970 |
| 40 | 1.000 | 135 | 2.481 | 35 | 1.061 |
| 45 | 1.078 | 140 | 2.559 | 40 | 1.147 |
| 50 | 1.156 | 145 | 2.637 | 45 | 1.234 |
| 55 | 1.234 | 150 | 2.715 | 50 | 1.320 |
| 60 | 1.312 | 155 | 2.793 | 55 | 1.407 |
| 65 | 1.390 | 160 | 2.871 | 60 | 1.493 |
| 70 | 1.468 | 165 | 2.949 | 65 | 1.579 |
| 75 | 1.546 | 170 | 3.053 | 70 | 1.666 |
| 80 | 1.624 | 175 | 3.175 | 75 | 1.752 |
| 85 | 1.702 | 180 | 3.296 | 80 | 1.839 |
| 90 | 1.780 | 185 | 3.418 | 85 | 1.925 |
| 95 | 1.858 | 190 | 3.539 | 90 | 2.012 |
| 100 | 1.935 | 195 | 3.661 | 95 | 2.098 |
| 105 | 2.013 | 200 | 3.783 | 100 | 2.185 |
| 110 | 2.091 | 205 | 3.904 | 105 | 2.271 |
| 115 | 2.169 | 210 | 4.026 | 110 | 2.358 |
| 120 | 2.247 | 215 | 4.148 | 115 | 2.444 |
| 125 | 2.325 | | | 120 | 2.530 |
| | | | | 125 | 2.617 |
| | | | | 130 | 2.703 |
| | | | | 135 | 2.790 |
| | | | | 140 | 2.876 |
| | | | | 145 | 2.963 |
| | | | | 150 | 3.096 |
| | | | | 155 | 3.241 |
| | | | | 160 | 3.386 |
| | | | | 165 | 3.532 |
| | | | | 170 | 3.677 |
| | | | | 175 | 3.822 |
| | | | | 180 | 3.967 |
| | | | | 185 | 4.112 |

Thickness is intumescent only. Beams up to protection thickness of 3.950mm.

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SHERWIN WILLIAMS PROTECTIVE AND MARINE

Firetex FX7000/FX8000

Table 3

| Hollow Rectangular Columns (4-Sided protection): 520°C | | | | | | | |
|--|--------------|--------------------------------------|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 30 minutes | | | | 45 minutes | | | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 155 | 0.531 | 245 | 1.308 | 90 | 0.531 | 215 | 2.523 |
| 160 | 0.550 | 250 | 1.353 | 95 | 0.548 | 220 | 2.607 |
| 165 | 0.594 | 255 | 1.397 | 100 | 0.630 | 225 | 2.687 |
| 170 | 0.639 | 260 | 1.442 | 105 | 0.712 | 230 | 2.767 |
| 175 | 0.684 | 265 | 1.487 | 110 | 0.793 | 235 | 2.846 |
| 180 | 0.728 | 270 | 1.531 | 115 | 0.875 | 240 | 2.925 |
| 185 | 0.773 | 275 | 1.576 | 120 | 0.956 | 245 | 3.004 |
| 190 | 0.817 | 280 | 1.620 | 125 | 1.038 | 250 | 3.083 |
| 195 | 0.862 | 285 | 1.665 | 130 | 1.119 | 255 | 3.162 |
| 200 | 0.907 | 290 | 1.708 | 135 | 1.201 | 260 | 3.241 |
| 205 | 0.951 | 295 | 1.750 | 140 | 1.283 | 265 | 3.320 |
| 210 | 0.996 | 300 | 1.793 | 145 | 1.364 | 270 | 3.400 |
| 215 | 1.040 | 305 | 1.835 | 150 | 1.446 | 275 | 3.479 |
| 220 | 1.085 | 310 | 1.877 | 155 | 1.527 | 280 | 3.558 |
| 225 | 1.130 | 315 | 1.920 | 160 | 1.609 | 285 | 3.637 |
| 230 | 1.174 | 320 | 1.962 | 165 | 1.691 | 290 | 3.716 |
| 235 | 1.219 | 325 | 2.004 | 170 | 1.774 | 295 | 3.795 |
| 240 | 1.264 | 330 | 2.047 | 175 | 1.857 | 300 | 3.874 |
| | | | | 180 | 1.940 | 305 | 3.953 |
| | | | | 185 | 2.024 | 310 | 4.033 |
| | | | | 190 | 2.107 | 315 | 4.112 |
| | | | | 195 | 2.190 | 320 | 4.191 |
| | | | | 200 | 2.274 | 325 | 4.270 |
| | | | | 205 | 2.357 | 330 | 4.349 |
| | | | | 210 | 2.440 | | |

Thickness is intumescent only.

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SHERWIN WILLIAMS PROTECTIVE AND MARINE

Firetex FX7000/FX8000

Table 3 continued

| Hollow Rectangular Columns (4-Sided protection): 520°C | | | | | | | | | |
|--|--------------|--------------------------------------|--------------|--------------------------------------|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 60 minutes | | 75 minutes | | 90 minutes | | 105 minutes | | 120 minutes | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 65 | 0.531 | 45 | 0.531 | 60 | 1.264 | 55 | 2.376 | 35 | 2.376 |
| 70 | 0.655 | 50 | 0.535 | 65 | 1.302 | 60 | 2.424 | 40 | 2.460 |
| 75 | 0.779 | 55 | 0.693 | 70 | 1.674 | 65 | 2.784 | 45 | 2.760 |
| 80 | 0.903 | 60 | 0.851 | 75 | 2.046 | 70 | 3.144 | 50 | 3.060 |
| 85 | 1.028 | 65 | 1.010 | 80 | 2.417 | 75 | 3.504 | 55 | 3.360 |
| 90 | 1.152 | 70 | 1.168 | 85 | 2.747 | 80 | 3.864 | 60 | 3.660 |
| 95 | 1.276 | 75 | 1.326 | 90 | 3.013 | 85 | 4.224 | 65 | 3.960 |
| 100 | 1.401 | 80 | 1.484 | 95 | 3.280 | | | 70 | 4.260 |
| 105 | 1.525 | 85 | 1.642 | 100 | 3.547 | | | | |
| 110 | 1.649 | 90 | 1.829 | 105 | 3.813 | | | | |
| 115 | 1.764 | 95 | 2.022 | 110 | 4.080 | | | | |
| 120 | 1.876 | 100 | 2.215 | 115 | 4.347 | | | | |
| 125 | 1.989 | 105 | 2.408 | | | | | | |
| 130 | 2.101 | 110 | 2.601 | | | | | | |
| 135 | 2.213 | 115 | 2.809 | | | | | | |
| 140 | 2.325 | 120 | 3.021 | | | | | | |
| 145 | 2.438 | 125 | 3.233 | | | | | | |
| 150 | 2.550 | 130 | 3.445 | | | | | | |
| 155 | 2.669 | 135 | 3.656 | | | | | | |
| 160 | 2.813 | 140 | 3.868 | | | | | | |
| 165 | 2.957 | 145 | 4.080 | | | | | | |
| 170 | 3.101 | 150 | 4.292 | | | | | | |
| 175 | 3.245 | 155 | 4.504 | | | | | | |
| 180 | 3.389 | | | | | | | | |
| 185 | 3.533 | | | | | | | | |
| 190 | 3.677 | | | | | | | | |
| 195 | 3.821 | | | | | | | | |
| 200 | 3.965 | | | | | | | | |
| 205 | 4.109 | | | | | | | | |
| 210 | 4.253 | | | | | | | | |
| 215 | 4.397 | | | | | | | | |
| 220 | 4.541 | | | | | | | | |

Thickness is intumescent only.

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Issued: 13th January 2006
Reissued: 31st January 2017
Valid to: 30th June 2019

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Firetex FX7000/FX8000

Table 4

| Circular Hollow Columns (Fully Exposed): 520°C | | | | | | | |
|--|--------------|--------------------------------------|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 30 minutes | | | | 45 minutes | | | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 110 | 0.455 | 225 | 1.284 | 60 | 0.455 | 200 | 1.860 |
| 115 | 0.476 | 230 | 1.321 | 65 | 0.461 | 205 | 1.893 |
| 120 | 0.512 | 235 | 1.358 | 70 | 0.534 | 210 | 1.927 |
| 125 | 0.549 | 240 | 1.383 | 75 | 0.607 | 215 | 1.960 |
| 130 | 0.586 | 245 | 1.392 | 80 | 0.680 | 220 | 1.993 |
| 135 | 0.623 | 250 | 1.400 | 85 | 0.753 | 225 | 2.027 |
| 140 | 0.659 | 255 | 1.409 | 90 | 0.826 | 230 | 2.060 |
| 145 | 0.696 | 260 | 1.417 | 95 | 0.899 | 235 | 2.093 |
| 150 | 0.733 | 265 | 1.426 | 100 | 0.972 | 240 | 2.127 |
| 155 | 0.770 | 270 | 1.434 | 105 | 1.045 | 245 | 2.160 |
| 160 | 0.806 | 275 | 1.443 | 110 | 1.118 | 250 | 2.193 |
| 165 | 0.843 | 280 | 1.451 | 115 | 1.190 | 255 | 2.227 |
| 170 | 0.880 | 285 | 1.460 | 120 | 1.263 | 260 | 2.260 |
| 175 | 0.917 | 290 | 1.468 | 125 | 1.336 | 265 | 2.285 |
| 180 | 0.954 | 295 | 1.477 | 130 | 1.393 | 270 | 2.297 |
| 185 | 0.990 | 300 | 1.485 | 135 | 1.427 | 275 | 2.310 |
| 190 | 1.027 | 305 | 1.494 | 140 | 1.460 | 280 | 2.322 |
| 195 | 1.064 | 310 | 1.502 | 145 | 1.493 | 285 | 2.334 |
| 200 | 1.101 | 315 | 1.511 | 150 | 1.527 | 290 | 2.347 |
| 205 | 1.137 | 320 | 1.519 | 155 | 1.560 | 295 | 2.359 |
| 210 | 1.174 | 325 | 1.527 | 160 | 1.593 | 300 | 2.371 |
| 215 | 1.211 | 330 | 1.536 | 165 | 1.627 | 305 | 2.384 |
| 220 | 1.248 | | | 170 | 1.660 | 310 | 2.396 |
| | | | | 175 | 1.693 | 315 | 2.408 |
| | | | | 180 | 1.727 | 320 | 2.421 |
| | | | | 185 | 1.760 | 325 | 2.433 |
| | | | | 190 | 1.793 | 330 | 2.445 |
| | | | | 195 | 1.827 | | |

Thickness is intumescent only.

CERTIFICATE No CF 384

SHERWIN WILLIAMS PROTECTIVE AND MARINE

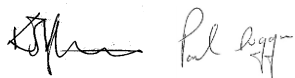
Firetex FX7000/FX8000

Table 4 continued

| Circular Hollow Columns (Fully Exposed): 520°C | | | | | |
|--|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 60 minutes | | | | 75 minutes | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 80 | 1.242 | 210 | 2.884 | 60 | 1.242 |
| 85 | 1.295 | 215 | 2.929 | 65 | 1.298 |
| 90 | 1.380 | 220 | 2.974 | 70 | 1.503 |
| 95 | 1.465 | 225 | 3.019 | 75 | 1.707 |
| 100 | 1.550 | 230 | 3.064 | 80 | 1.912 |
| 105 | 1.635 | 235 | 3.109 | 85 | 2.116 |
| 110 | 1.720 | 240 | 3.154 | 90 | 2.301 |
| 115 | 1.805 | 245 | 3.199 | 95 | 2.407 |
| 120 | 1.889 | 250 | 3.244 | 100 | 2.513 |
| 125 | 1.974 | 255 | 3.289 | 105 | 2.619 |
| 130 | 2.059 | 260 | 3.334 | 110 | 2.724 |
| 135 | 2.144 | 265 | 3.379 | 115 | 2.830 |
| 140 | 2.229 | 270 | 3.424 | 120 | 2.936 |
| 145 | 2.298 | 275 | 3.469 | 125 | 3.042 |
| 150 | 2.343 | 280 | 3.514 | 130 | 3.148 |
| 155 | 2.388 | 285 | 3.559 | 135 | 3.253 |
| 160 | 2.433 | 290 | 3.604 | 140 | 3.359 |
| 165 | 2.478 | 295 | 3.650 | 145 | 3.465 |
| 170 | 2.523 | 300 | 3.695 | 150 | 3.571 |
| 175 | 2.568 | 305 | 3.740 | 155 | 3.677 |
| 180 | 2.613 | 310 | 3.785 | 160 | 3.783 |
| 185 | 2.658 | 315 | 3.830 | 165 | 3.888 |
| 190 | 2.703 | 320 | 3.875 | 170 | 3.994 |
| 195 | 2.749 | 325 | 3.920 | 175 | 4.100 |
| 200 | 2.794 | 330 | 3.965 | 180 | 4.206 |
| 205 | 2.839 | | | | |

Thickness is intumescent only.

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Issued: 13th January 2006
 Reissued: 31st January 2017
 Valid to: 30th June 2019

CERTIFICATE No CF 384

SHERWIN WILLIAMS PROTECTIVE AND MARINE

Firetex FX7000/FX8000

Table 4 continued

| Circular Hollow Columns (Fully Exposed): 520°C | | | | | |
|--|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 90 minutes | | 105 minutes | | 120 minutes | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 45 | 1.242 | 35 | 1.242 | 35 | 2.052 |
| 50 | 1.380 | 40 | 1.462 | 40 | 2.166 |
| 55 | 1.701 | 45 | 1.871 | 45 | 2.735 |
| 60 | 2.023 | 50 | 2.280 | 50 | 3.304 |
| 65 | 2.320 | 55 | 2.630 | 55 | 3.873 |
| 70 | 2.523 | 60 | 2.980 | | |
| 75 | 2.725 | 65 | 3.330 | | |
| 80 | 2.927 | 70 | 3.680 | | |
| 85 | 3.129 | 75 | 4.030 | | |
| 90 | 3.332 | | | | |
| 95 | 3.534 | | | | |
| 100 | 3.736 | | | | |
| 105 | 3.938 | | | | |
| 110 | 4.140 | | | | |

Thickness is intumescent only.

CERTIFICATE No CF 384

SHERWIN WILLIAMS PROTECTIVE AND MARINE

Firetex FX7000/FX8000

Table 5

| Rectangular Hollow Beams (3-Sided protection): 620°C | | | | | | | |
|--|--------------|--------------------------------------|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 30 minutes | | 45 minutes | | 60 minutes | | 75 minutes | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 205 | 0.257 | 120 | 0.257 | 80 | 0.257 | 60 | 0.257 |
| 210 | 0.258 | 125 | 0.332 | 85 | 0.306 | 65 | 0.285 |
| 215 | 0.303 | 130 | 0.411 | 90 | 0.409 | 70 | 0.435 |
| 220 | 0.347 | 135 | 0.489 | 95 | 0.512 | 75 | 0.585 |
| 225 | 0.392 | 140 | 0.568 | 100 | 0.615 | 80 | 0.713 |
| 230 | 0.437 | 145 | 0.648 | 105 | 0.733 | 85 | 0.834 |
| 235 | 0.481 | 150 | 0.732 | 110 | 0.852 | 90 | 0.956 |
| 240 | 0.526 | 155 | 0.815 | 115 | 0.970 | 95 | 1.078 |
| 245 | 0.570 | 160 | 0.899 | 120 | 1.088 | 100 | 1.200 |
| 250 | 0.615 | 165 | 0.982 | 125 | 1.206 | 105 | 1.322 |
| 255 | 0.658 | 170 | 1.065 | 130 | 1.325 | 110 | 1.444 |
| 260 | 0.701 | 175 | 1.149 | 135 | 1.443 | 115 | 1.566 |
| 265 | 0.744 | 180 | 1.232 | 140 | 1.561 | 120 | 1.688 |
| 270 | 0.786 | 185 | 1.316 | 145 | 1.680 | 125 | 1.810 |
| 275 | 0.829 | 190 | 1.399 | 150 | 1.798 | 130 | 1.932 |
| 280 | 0.872 | 195 | 1.483 | 155 | 1.916 | 135 | 2.054 |
| 285 | 0.915 | 200 | 1.566 | 160 | 2.034 | 140 | 2.176 |
| 290 | 0.958 | 205 | 1.649 | 165 | 2.153 | | |
| 295 | 1.001 | 210 | 1.733 | | | | |
| 300 | 1.043 | 215 | 1.816 | | | | |
| 305 | 1.086 | 220 | 1.900 | | | | |
| 310 | 1.129 | 225 | 1.983 | | | | |
| 315 | 1.172 | 230 | 2.067 | | | | |
| 320 | 1.215 | 235 | 2.150 | | | | |
| 325 | 1.258 | 240 | 2.233 | | | | |
| 330 | 1.300 | | | | | | |

Thickness is intumescent only. Beams to include a concrete slab.

CERTIFICATE No CF 384

SHERWIN WILLIAMS PROTECTIVE AND MARINE

Firetex FX7000/FX8000

Table 5 continued

| Rectangular Hollow Beams (3-Sided protection): 620°C | | | | | |
|--|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| 90 minutes | | 105 minutes | | 120 minutes | |
| Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm | Section Factor up to m ⁻¹ | Thickness mm |
| 50 | 0.257 | 40 | 0.257 | 105 | 2.200 |
| 55 | 0.358 | 45 | 0.285 | | |
| 60 | 0.542 | 50 | 0.428 | | |
| 65 | 0.690 | 55 | 0.571 | | |
| 70 | 0.816 | 60 | 0.714 | | |
| 75 | 0.942 | 65 | 0.857 | | |
| 80 | 1.068 | 70 | 1.000 | | |
| 85 | 1.194 | 75 | 1.142 | | |
| 90 | 1.319 | 80 | 1.285 | | |
| 95 | 1.445 | 85 | 1.428 | | |
| 100 | 1.571 | 90 | 1.571 | | |
| 105 | 1.697 | 95 | 1.714 | | |
| 110 | 1.823 | 100 | 1.857 | | |
| 115 | 1.948 | 105 | 2.000 | | |
| 120 | 2.074 | 110 | 2.143 | | |
| 125 | 2.200 | | | | |

Thickness is intumescent only. Beams to include a concrete slab.