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Test Report: ICL/H17/7961

BS 476 Part 6:1989+A1:2009 (2015)
Fire tests on building materials and structures
Part 6: Method of test for fire propagation for products

Sponsored By

LP Technology Ltd
Albert Works
Stanley Street
Coline BB8 9AE

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**BS 476 Part 6:1989+A1:2009 (2015)
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1 Purpose of Test

To determine the fire propagation index of the sample specified in Section 2 when subjected to the fire propagation test specified in British Standard 476: Part 6 : 1989 + Amendment A1; 2009 (2015).

2 Description of Test Specimen

The description of the specimen given below has been prepared from information provided by the sponsor of the test and Interscience Communications Ltd was not involved in any selection or sampling procedure.

The product was a 31mm thick sheet coated with a black paint.

The sponsor of the test did not provide further details relating to the composition of the sheet, the composition of the paint and rate and method of application.

3 Conditioning of Test Specimens

The specimens were received on 11th August 2017.

The sample was conditioned to constant mass at a temperature of $23\pm 2^{\circ}\text{C}$ and a relative humidity of $50\pm 10\%$ and maintained in this condition until required for testing.

4 Date of Test

The test was performed on 21st September 2017.

5 Test Procedure

The test was carried out in accordance with BS 476: Part 6+A1:2009 (2015), and this report should be read in conjunction with this standard.

Note: This test was subcontracted to another UKAS accredited test laboratory.

6 Test Results

The test results relate only to the burning behaviour of the specimens of the product under the particular conditions of test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

The test results relate only to the specimens of the product in the form in which they were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results.

Table 1 shows the Temperature rise for calibration sheet and specimens

Table 2 shows the Index of performance for each specimen

| Time (t) | Temperature Rise -°C | | | |
|----------|----------------------|-----------|-----|-----|
| Mins | Calibration | Specimens | | |
| | Sheet | a | b | c |
| 0.5 | 18 | 27 | 22 | 21 |
| 1 | 21 | 26 | 24 | 23 |
| 1.5 | 24 | 27 | 24 | 22 |
| 2 | 26 | 29 | 27 | 24 |
| 2.5 | 29 | 33 | 31 | 26 |
| 3 | 33 | 36 | 34 | 29 |
| 4 | 66 | 45 | 41 | 59 |
| 5 | 103 | 116 | 131 | 137 |
| 6 | 129 | 118 | 136 | 128 |
| 7 | 150 | 143 | 131 | 215 |
| 8 | 169 | 188 | 174 | 227 |
| 9 | 181 | 212 | 206 | 230 |
| 10 | 191 | 230 | 216 | 238 |
| 12 | 207 | 256 | 245 | 259 |
| 14 | 221 | 247 | 240 | 252 |
| 16 | 230 | 238 | 231 | 243 |
| 18 | 233 | 239 | 240 | 246 |
| 20 | 242 | 240 | 239 | 244 |

t - time in minutes from the time at which the gas jets were ignited.

a, b and c - represent individual specimens giving valid test results.

Table 2: Index of performance

| Specimen | s ₁ | s ₂ | s ₃ |
|----------|----------------|----------------|----------------|
| a | 2.5 | 11.9 | 7.0 |
| b | 1.1 | 11.9 | 6.7 |
| c | 0.2 | 14.7 | 7.2 |

7 Observations

No intumescence or deformation of any specimen occurred that affected the required gas input. No melting or slumping occurred that prevented the material from being exposed to the heating conditions. Air flow through the apparatus was not restricted by fallen material or by soot accumulation in the chimney.

8 Conclusion

A sample as described in this report, when tested in accordance with BS 476: Part 6: 1989 Amendment A1 ; 2009 , achieved:

Fire propagation index, I = 21.1

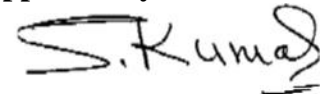
sub-indices i₁ = 1.3
 i₂ = 12.8
 i₃ = 7.0

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