

Technical Report



Paint testing

For

S. Lucas Limited

Final Report

Work Carried Out By

J. Gadd

Group Leader

Peter Collins

PRA Ref: 75221-299b

11 April 2013

Global Surface Coatings Covered

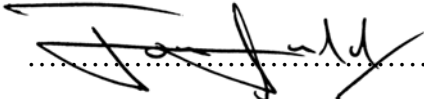


Final Report

PRA Ref. Number 75221-299b
Date Received 04 February 2013
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Client S. Lucas Limited
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Work Requested Paint testing

Samples Submitted Liquid Paint

Work Carried out by 

J. Gadd

Approved by 

P. Collins, T. Glazier

Authorised Signatory

Note – Opinions and interpretations expressed herein are outside the scope of UKAS accreditation, as are tests marked with an asterisk. A full copy of our UKAS schedule is available upon request.

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I Materials Submitted For Testing

4 liquid coatings, identified as:

Muralplast MP Quartz textured white

Muralplast MSP satin RAL 9016

Brand leader masonry paint

Keim Soldalit

2 Test Procedure

2.1 Surface Spread of Flame and Fire Propagation

Two coats of the Muralplast MP Quartz textured white were applied by roller to sheets of building board substrate, the first coat being diluted 10% by volume with water. The coated board was then tested for surface spread of flame and fire propagation in accordance with BS 476 parts 6 and 7 by an associated laboratory. The class of the coating was expressed as defined in paragraph A13(b) of Approved document B, 'Fire Safety', to the Building Regulations 2000.

2.2 Artificial Weathering

Films of the Muralplast MP Quartz textured white were applied to an aluminium panel substrate using a 150µ kbar, and the colour of the dry coatings determined using the CIELab method of colour space as measured by a Gretag Macbeth Color-Eye 7000A spectrophotometer in accordance with BS EN ISO 7724-2. The panels were then exposed in a QUV weatherometer operating in accordance with BS EN ISO 11507 for a period of 1000 hours using a test programme consisting of 4 hours UV light at 60°C and 4 hours condensation at 50°C, continuously cycling. After 1000 exposure the colour of the coatings was re-measured and the colour difference in delta E units calculated in accordance with BS EN ISO 7724-3.

2.3 Liquid Water Permeability

Two coats of the Muralplast MP Quartz textured white were applied by brush to a calcium silicate brick substrate. The liquid water penetration was then determined in accordance with BS EN 1062-3, and the coating classified in accordance BS EN 1062-1.

2.4 Water Vapour Permeability

Two films of each of the coatings were applied to paper supports using a 150µm kbar. The water vapour permeability of the dry coatings was then determined in accordance with BS EN ISO 7783 using the wet-cup method, and the coatings classified in accordance with BS EN 1062-1. For reference a cup was also prepared using an uncoated paper support.

3 Results and Observations

3.1 Surface Spread of Flame and Fire Propagation

Sample	Class
Muralplast MP Quartz textured white	0

3.2 Artificial Weathering

Sample	Delta E after 1000 hours exposure
Muralplast MP Quartz textured white	0.60/0.57

A delta E of 1 is usually discernible to most observers

3.3 Liquid Water Permeability

Sample	Mean liquid water permeability, W (kg/m ² .h ^{0.5})	Classification to BS EN 1062-1
Muralplast MP Quartz textured white	0.024	Low (≤0.1)

3.4 Water Vapour Permeability

Sample	Mean water vapour transmission rate, V (g/m ² .day)	Classification to BS EN 1062-1
Muralplast MP Quartz textured white	130	Medium (>15 ≤150)
Muralplast MSP satin RAL 9016	58	Medium (>15 ≤150)
Brand leader masonry paint	50	Medium (>15 ≤150)
Keim Soldalit	632	High (>150)
Uncoated paper support	728	High (>150)

4 Conclusions

Muralplast MP Quartz textured white demonstrates good resistance to spread of flame and fire propagation, achieving a top rating of 0 as defined in paragraph A13(b) of Approved document B, 'Fire Safety', to the Building Regulations 2000.

Muralplast MP Quartz textured white demonstrates good resistance to weathering with no significant colour change after 1000 hours of artificial weathering.

Muralplast MP Quartz textured white demonstrates good resistance to ingress of liquid water, with a liquid water permeability value well within that needed to achieve a good rating to BS EN 1062-1.

Muralplast MP Quartz textured white demonstrates breathability towards the top of the range needed to achieve a medium rating to BS EN 1062-1. It compares favourably to both Muralplast MSP satin RAL 9016 and Brand leader masonry paint in this respect, with a water vapour permeability value greater than twice that of both these coatings. The Keim Soldalit scores a high rating in this test, and it should be noted that its water vapour permeability value is approaching 90% of that observed for an uncoated paper support.

End of Report

TJG.



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