

Paint Testing - Muralplast MSP Matt

For

S Lucas Ltd

Final Report

Work Carried Out By

J. Gadd

T. Glazier

Group Leader

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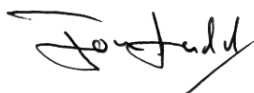


Final Report

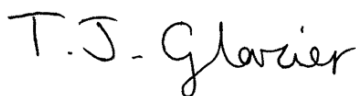
PRA Ref. Number 09-186c
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Client S Lucas Ltd
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Work Requested Paint Testing - Muralplast MSP Matt

Samples Submitted Coated Panels and Liquid Paint Sample

Work Carried out by 

J. Gadd, T. Glazier

Approved by 

J. Bourne, P. Collins, T. Glazier

Authorised Signatory

I Materials Submitted For Testing

Galvanised steel panels coated with Muralplast MSP Matt as follows.

3 off 150 x 75mm

2 off 150 x 100mm

Glasroc building board panels coated with Muralplast MSP Matt as follows

9 off 885 x 267 x 13mm thick

5 off 225 x 225 x 13 mm thick

250 ml of Muralplast MSP Matt liquid paint.

Note that the product is also known as Bedec MSP Matt.

2 Test Procedure

2.1 Scrub Resistance

The liquid paint was applied to a black plastic panel and aged for 28 days before testing the scrub resistance in accordance with BS EN ISO 11998. The weight loss in g/m² after 200 scrub cycles was determined and used to calculate the loss in film thickness. The loss in film thickness was then used to classify the coating in accordance with EN 13300

2.2 Pull Off Adhesion

A pull off adhesion testing in accordance with BS EN ISO 4624 was carried out on the 150 x 100mm galvanised panels.

2.3 Bend Test

A conical mandrel bend test in accordance with BS EN ISO 6860 was carried out after the QUV weathering test.

2.4 QUV Weathering

The samples were exposed to 1000 artificial weathering in accordance with BS EN ISO 11507 in a QUV weatherometer using UVA340 lamps and operating a continuously cycling test program of 4 hours UV at 60°C and 4 hours condensation at 50°C. Colour measurements in accordance with BS ISO 7724-2 and 60° gloss measurements in accordance with BS EN ISO 2813 were carried out before and after the test. The total colour change as a result of the weathering was expressed in delta E units.

2.5 Surface Spread of Flame and Fire Propagation Testing

The coated Glasroc panels were sent to an associated laboratory (Exova Warringtonfire) for testing in accordance with BS 476 Part 7 - Surface Spread of Flame and BS 476 Part 6 - Fire Propagation Index to demonstrate compliance with Class 0.

3 Results and Observations

3.1 Scrub Resistance

Muralplast MSP Matt		
Weight Loss After 200 Scrub Cycles (g/m ²)	Film Thickness Loss (µm)	EN 13300 Class
5.6	2.4	1

3.2 Pull Off Adhesion

Muralplast MSP Matt		
Test	Pull Off Strength MPa	Failure Mode
1	1.621	100% adhesive coating/substrate.
2	1.495	95% adhesive coating/substrate, 5% cohesive in the coating layer.
3	1.626	95% adhesive coating/substrate, 5% cohesive in the coating layer.
4	1.664	95% adhesive coating/substrate, 5% cohesive in the coating layer.
5	1.568	95% adhesive coating/substrate, 5% cohesive in the coating layer.
6	1.528	90% adhesive coating/substrate, 10% cohesive in the coating layer.

3.3 Bend Test

Muralplast MSP Matt	
Test	Extent of Cracking
After 1000 hours QUV weathering	No cracking observed

3.4 QUV Weathering

Muralplast MSP Matt			
Sample	Exposure (hrs)	60° Gloss	Visual Assessment After Test
1	0	2.8	No apparent change
	1000	2.5	
2	0	2.8	No apparent change
	1000	2.5	
3	0	2.8	No apparent change
	1000	2.5	

Muralplast MSP Matt – Colour Change on Weathering					
Sample	Exposure (hrs)	L	a	b	Total Colour Change (Delta E)
1	0	96.462	-0.906	0.879	
	1000	96.132	-0.882	0.859	0.331
2	0	96.814	-0.909	0.923	
	1000	96.551	-0.868	0.922	0.266
3	0	96.472	-0.925	0.805	
	1000	96.168	-0.958	1.562	0.816

3.5 Surface Spread of Flame and Fire Propagation Tests

Test	BS 476 Part 7 Surface Spread of Flame	BS 476 Part Fire Propagation
Muralplast MSP Matt	Class 1	First Index - 2.7 Second Index – 0.7 Third Index – 0.1 Total Index Performance -3.5
Exova Warringtonfire Report Number*	189311	189307
The product complies with the requirements of Class 0		

*The product is referred to in these documents as Bedec MSP Matt

4 Conclusions

The product has very good scrub resistance.

The colour and gloss changes are very low and the product remains flexible after 1000 hours QUV weathering.

The product has moderately good adhesion to galvanized surfaces.

The product meets the requirements of Class 0 (limited combustibility) as defined by the Building Regulations Approved Document B:

End of Report

T.S.G.



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