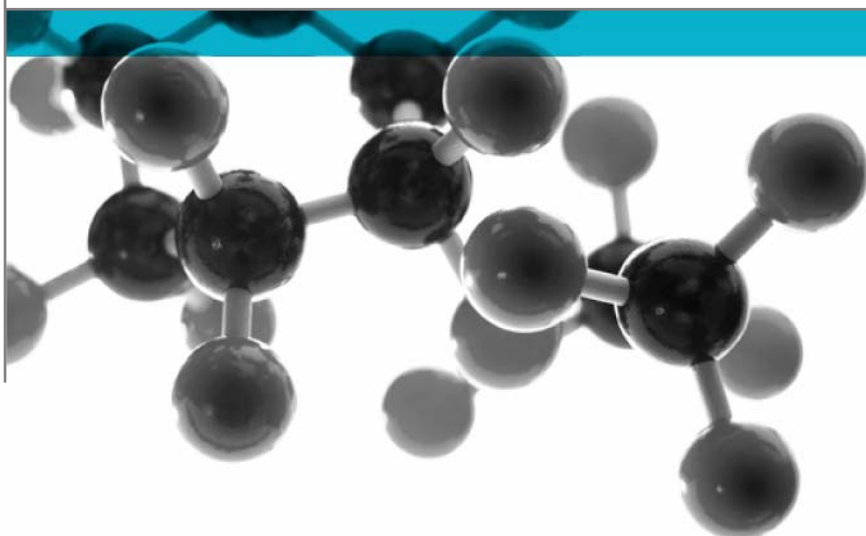


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BS 6853: 1999



Summary Test Report

A Report To: PPG Industries (UK) Limited

Document Reference: 194315, 194324, 194340 & 194351

Date: 30th July 2010

Issue No.: 1

Page 1

Testing
Advising
Assuring



Executive Summary


Objective To assess the results of tests to BS 476: Part 7: 1997, BS 476: Part 6 1989, BS 6853: 1999: Annex B.2 and BS 6853: 1999: Annex D.8.4, obtained on specimens of a product and to provide an opinion of compliance with the requirements for an Interior Vertical Surface, as defined in BS 6853: 1999.

Generic Description	Product reference	Thickness	Weight per unit area, density or specific gravity
A six coat coating system applied to a 2mm thick aluminium substrate	"PPG2010003"	2.13mm*	5.87kg/m ² *
Individual components used to manufacture composite:			
2-pack polyurethane topcoat	"Selemix 7-550 UHS PU Topcoat (1.755.5000)"	2 x 25 microns	1.26
2-pack polyurethane primer	"Selemix PU Primer 2.705.0500"	2 x 25 microns	2.01
Phosphoric acid based etch primer	"Nexa Autocolor P565-625 Primecoat Etch Primer"	2 x 8 microns	1.36
Aluminium substrate	"Aluminium 6082 T6"	2mm	2.70g/cm ³
*Determined by Exova Warringtonfire			
Please see page 5 of this test report for the full description of the product tested			


Test Sponsor PPG Industries (UK) Limited, Needham Road, Stowmarket, Suffolk, IP14 2AD

Opinion We consider the results of the tests detailed above demonstrate that the product, as tested, complies with the interior vertical surfaces requirements (detailed in Table 2 of BS 6853:1999) for a Category Ia, Category Ib and Category II Vehicle.

Signatories



Responsible Officer
T. Mort *
Senior Technical Officer



Authorised
C. Dean *
Operations Manager

* For and on behalf of **Exova Warringtonfire**.

Report Issued: 30th July 2010

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 Author: T. Mort Issue Date: 30th July 2010
 Client: PPG Industries (UK) Limited Issue No.: 1



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Test Details

Terms Reference Of To assess the results of tests to BS 476: Part 7: 1997, BS 476: Part 6 1989, BS 6853: 1999: Annex B.2 and BS 6853: 1999: Annex D.8.4, obtained on specimens of a product and to provide an opinion of compliance with the requirements for an Interior Vertical Surface, as defined in BS 6853: 1999.

Introduction Specimens of a product have been tested in accordance with the test methods specified in BS 476: Part 7: 1997 “Surface Spread of Flame Test for Materials”, BS 476: Part 6 1989 (Fire Propagation) BS 6853: 1999: Annex B.2 “Determination of Weighted Summation of Toxic Fume” and BS 6853: 1999: Annex D.8.4 “Methods for Measuring Smoke Density, Panel Test”. The results of the tests are fully reported in the **Exova Warringtonfire** test reports No's. 194315, 194324, 194340 & 194351.

This summary report has been prepared at the request of the sponsor and relates the results of the tests to the requirements for an interior vertical surface, as defined in Table 2 of BS 6853: 1999.

This summary should be read in conjunction with, and not accepted as a substitute for the **Exova Warringtonfire** test reports No's. 194315, 194324, 194340 & 194351. Those test reports may include additional information, which may be relevant to the assessment of the potential fire hazard of the product.

Face subjected to tests The specimens were mounted in the test positions such that the coated face was exposed to the heating conditions of the tests.

Results of test The following results were obtained for the specimens, which were tested.

BS 476: Part 7: 1997 Class 1 surface spread of flame

BS 476: Part 6: 1989 Fire propagation index, I = 0.0
Sub index, i_1 = 0.0

BS 6853: 1999: Annex B.2 R = 0.31

BS 6853: 1999: Annex D.8.4 A_0 (ON) = 0.493
 A_0 (OFF) = 0.695

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

Description of Test Specimens

The description of the specimens given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given. The specimens were supplied by the sponsor of the test. **Exova Warringtonfire** was not involved in any selection or sampling procedure.

General description		A six coat coating system applied to a 2mm thick aluminium substrate
Product reference of coating system		"PPG2010003"
Overall coating system thickness		Approx. 116 microns
Overall thickness of composite		2.13mm (determined by Exova Warringtonfire)
Overall weight per unit area of composite		5.87kg/m ² (determined by Exova Warringtonfire)
Final coating product (Test face)	Generic type	2-pack polyurethane topcoat
	Product reference	"Selemix 7-550 UHS PU Topcoat (1.775.5000)"
	Name of manufacturer	PPG Industries
	Colour	"Blue (RAL 5002)"
	Number of coats	2
	Application thickness per coat	25 microns per coat
	Application method	HVLP spray
	Specific gravity	1.26
	Flame retardant details	See Note 1 below
Curing process per coat	1 st coat – 10 mins flash off 2 nd coat - 10 mins flash off + 30 mins at 60°C	
Second coating product	Generic type	2-pack polyurethane primer
	Product reference	"Selemix PU Primer 2.705.0500"
	Name of manufacturer	PPG Industries
	Colour	"Light Grey"
	Number of coats	2
	Application thickness per coat	25 microns per coat
	Application method	HVLP spray
	Specific gravity	2.01
	Flame retardant details	See Note 1 below
Curing process per coat	1 st coat – 10 mins flash off at RT 2 nd coat - 10 mins flash off + 30 mins at 60°C	
First coating product	Generic type	Phosphoric acid based etch primer
	Product reference	"Nexa Autocolor P565-625 Primecoat Etch Primer"
	Name of manufacturer	PPG Industries
	Colour	"Grey / Green"
	Number of coats	2
	Application thickness per coat	8 microns
	Application method	HVLP spray
	Specific gravity	1.36
	Flame retardant details	See Note 1 below
Curing process per coat	1 st coat – 10 mins flash off at RT 2 nd coat - 30 mins flash off before recoating.	

Substrate	Product reference	"Aluminium 6082 T6"
	Generic type	Aluminium
	Name of manufacturer	Pro-Test Panels Ltd.
	Thickness	2mm
	Density	2.70g/cm ³
	Flame retardant details	The substrate is inherently flame retardant
	Preparation details	Machine sand with P240 paper and degrease with Nexa Autocolor P850-1378 Spirit Wipe
Brief description of manufacturing process of coatings		All paint systems manufactured by HSD / Beadmill process. All products used as per Product Data Sheet

Note 1. The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the component.

Classification

Opinion

We consider the results of the tests detailed above demonstrate that the product, as tested, complies with the interior vertical surfaces requirements (detailed in Table 2 of BS 6853:1999) for a Category Ia, Category Ib and Category II Vehicle.

Validity of opinion

This opinion is based on the requirements of BS 6853 at the date of this report. If BS 6853 is revised or amended in any way subsequent to that date, care must be taken to ensure that this opinion is not invalidated by those revisions or amendments.

The opinion has been formulated on the assumption that the specimens are representative of the product in practice. **Exova Warringtonfire** was not involved in any sampling or selection procedures which would confirm this or in any audit testing which would provide confidence in the consistency of the product in the tests.

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Revision History

Issue No :	Issue Date:
Revised By:	Approved By:
Reason for Revision:	

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