



Chiltern House Stocking Lane Hughenden Valley
High Wycombe Buckinghamshire HP14 4ND UK

t +44 (0) 1494 569 800 f +44 (0) 1494 564895
e cif@chilternfire.co.uk w www.chilternfire.co.uk

CONFIDENTIAL

Assessment Report: Chilt/P06015

**Assessment report of
doorsets for general performance and
security for Pacific Rim Wood (UK) Ltd**

Prepared for: Pacific Rim Wood (UK) Ltd
Royal Victoria House
The Pantiles
Royal Tunbridge Wells
Kent
TN2 5JU

Date: February 2006

Prepared by: Paul Andrews

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1 Introduction

This assessment has been commissioned by Pacific Rim Wood (UK) Ltd and relates to the general performance and security of timber based doors. This assessment is conducted in terms of the general performance requirements for PAS 23-1: 1999 Amendments 1 and 2 and Corrigendum 1, clauses 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10 and 6.11; and the security performance for PAS 24-1: 1999 Amendments 1 and 2, clauses A.4, A.5, A.6, A.7, A.9 and A.10.

This assessment procedure is in conformity with CDA01 Guidance on the methodology for testing/assessing hinged doorset ranges for performance in conformity with PAS 23-1: 1999 and PAS 24-1: 1999.

2 Proposal

The proposal is to justify variation in leaf construction to that tested in Chilt/P03037 and Chilt/P05019. In addition allow the frames and locking systems also tested to be inter changed. Where doorsets are fitted to the external face of a building this assessment will only cover leaves with skins of plywood suitably weather protected. All the other aspects and components of the doorset are to remain the same as tested. The weather performance classification will be 800U

The door leaf variations are as follows and are referenced in the Flamebreak Technical Manual (REV. A JUNE 2003).

Door leaf reference	Nominal leaf thickness mm	Facing description and thickness mm
430	44	9 MDF
630	45	4 or 6 ply
FF630	44	6 MDF
FF930	44	9 MDF
PF 930	44	9 HD chipboard
660	54	6 long grain ply
FF660	54	6 MDF

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3 Test evidence

3.1 General performance and security test Chilt/P03037 and Chilt/P05019

Description of construction (Ref. Chilt/P03037)

The specimens were identified as FLAMEBREAK 430 door leaf and timber frame with overall frame dimensions of 938mm wide x 2070mm high x 95mm deep and leaf dimensions of 833mm wide 1977mm high x 44mm thick. The specimens were locked with a non-removable key.

Door leaves (Flamebreak 430)

		Material/type	Dimensions (mm)	Density (kg/m ³)
Core		Albisia falcata	3No sheets 12 thick	280*
Facings		Plywood	4 thick	650*
Adhesive	Facing	Polyvinyl acetate	-	-
Lippings		Light red meranti - all faces	10 thick	400 - 510*
Finish		Sikens 045 mahogany stain	-	-

* Stated density, not checked by laboratory

** Nominal density

Door frame

		Material/type	Dimensions (mm)	Density (kg/m ³)
Head & jambs		Meranti	95 wide x 70 thick	400***
Stops		Integral	45 wide x 20 deep	-
Threshold		Meranti	145 wide x 46 thick	400***
Joint		Mortise and tenon with 2No 5mm x 100mm wood screws at each joint	-	-
Adhesive		Pro 30 D Fudal Din EN204	-	-

* Stated density not checked by laboratory

** Nominal density

*** Density measured by laboratory

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Hardware

		Make/type	Size (mm)	Fixing details (dimensions in mm)
Hinges		Lloyd Worrall No 899 double pressed butt hinges	100 high x 30 wide (blade size)	4No 5 x 44 wood screws per blade
Locking mechanism		Mul-T-Lock ref. ML240	250 high x 23 wide	2No 4 x 50 wood screws
Keeps	Upper	Supplied with lock	100 x 25	2No 4 x 30 wood screws
	Lower	Drilled through threshold plate	-	-
Centre		Supplied with lock	250 high x 30 wide	4No 4 x 30 wood screws
Handles		Mul-T-Lock Junior	127 lever length 30 diameter	6No 6 x 50 machine screws
Cylinder		Mul-T-Lock European profile ref. 51102134	-	2No 8 x 32 machine screws and lock nuts
Hinge bolts		ERA security bolt ref. 740-52	16 long x 12 diameter	Fitted by integral push fitting barbed bolt into door leaf
Threshold		Base plate non ferrous	31 wide x 3 thick x 1930 long	4 x 30 wood screws at 50 from corners and 100 centres

Perimeter sealing details

		Make/type	Size (mm)	Location
Door edges		Schlegel Qlon blade seal	8 blade length	Perimeter of the external door frame
Frame reveal	Head & jambs	None fitted	-	-
	Threshold	High impact PVC with flexible blade seal from Lloyd Worrall ref. TSB	12 high x 5 wide upstand 10 blade length	Push fitted into the threshold
Seal continuity		Seals uninterrupted by hardware	-	-

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Glazing

		Make/type/size (mm)	Location
Glass type & configuration		4 thick toughened glass	-
Overall aperture size		165 wide x 370 high	-
Sight size		125 wide x 325 high	Centre of door leaf 250 from the top edge
Sealants		Dow Corning mastic ref. 796	Between glass and bead
Glazing bead		26 wide x 15 high with 10° chamfer and 7 x 7 bolection return	Both internal and external face
Bead fixing	Internal	30 long steel glazing pins	Nominal 50 from corners and 50 centres
	External	4 x 32 security wood screws	Nominal 50 from corners and 50 centres

Door leaves (Flamebreak FF 930) (Ref. Chilt/P05019)

The specimens were identified as FLAMEBREAK FF930 door leaf and timber frame with overall frame dimensions of 1345mm wide x 2034mm high x 90mm deep and leaf dimensions of 1242mm wide 1978mm high x 44mm thick. The specimens were locked with a non-removable key.

		Material/type	Dimensions (mm)	Density (kg/m ³)
Core		Albisia falcata	3No sheets 12 thick	280*
Facings		MDF	9 thick	700**
Adhesive	Facing	Polyvinyl acetate	-	-
Lippings		Light red meranti - all faces	10 thick	400 - 510*
Finish		Sikens 045 mahogany stain	-	-

* Stated density, not checked by laboratory

** Nominal density

Door frame

		Material/type	Dimensions (mm)	Density (kg/m ³)
Head & jambs		Sapele	90 wide x 70 thick	640**
Stops		Integral	45 wide x 20 deep	-
Joint		Mortise and tenon with 2No 5mm x 100 wood screws at each joint	-	-
Adhesive		Pro 30 D Fudal Din EN204	-	-

* Stated density, not checked by laboratory

** Nominal density

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Hardware

	Make/type	Size (mm)	Fixing details (dimensions in mm)
Hinges	Lloyd Worrall No 899 double pressed butt hinges	100 high x 30 wide (blade size)	4No 5 x 44 wood screws per blade
Locking mechanism	Mul-T-Lock ref. ML240	250 high x 23 wide	2No 4 x 50 wood screws
Keep	Supplied with lock	250 high x 30 wide	4No 4 x 30 wood screws
Handles	Mul-T-Lock Junior	127 lever length 30 diameter	6No 6 x 50 machine screws
Cylinder	Mul-T-Lock European profile ref. 51102134	-	2No 8 x 32 machine screws and lock nuts

3.2 Test results

Table 1 Summary of testing procedure and results

Summary of testing procedure	Result
Chilt/P03037 PAS 23-1: 1999, Clauses 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11 and 6.14	Pass Weather performance category 800U
Chilt/P03037 PAS 24-1: 1999, Clauses A.4, A.5, A.6, A.7, A.9 and A.10	Pass
Chilt/P05019 PAS 23-1: 1999, Clause 6.10	Pass
Chilt/P05019 Clause A.6, A.7 and A.10	Pass

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4 Analysis

4.1 Observations

In order to justify the variation of door leaves, frames and locking systems it must be first established that the performance of the doorsets was stable and exhibited no signs of weakness that maybe exacerbated by the changes proposed.

It can be seen from the observations below, taken during the testing, that there were no issues recorded relating to the doorsets failing to conform to the requirements of the standards.

Table 2 Comments on testing

Chilt/P03037 PAS 23-1 Clauses	Comment	Results
6.2	No damage apparent	Pass
6.3	Achieved exposure category 800u	
6.4	No damage apparent	Pass
6.5	No damage apparent	Pass
6.6	No damage apparent	Pass
6.7	No damage apparent	Pass
6.8	No damage apparent	Pass
6.9	No damage apparent	Pass
6.10	No damage apparent	Pass
6.11	No damage apparent	Pass
6.14	No damage apparent	Pass

Chilt/P03037 PAS 24-1 Clauses	Comment	Results
A.4	No damage apparent	Pass
A.5	No damage apparent	Pass
A.6	No damage apparent	Pass
A.7	No alternative loading points found	No Vulnerability identified
A.9	No damage apparent	Pass
A.10	No damage apparent	Pass

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Table 3

Chilt/P05019 PAS 23-1 Clauses	Comment	Results
6.10	No damage apparent	Pass

Chilt/P05019 PAS 24-1 Clauses	Comment	Results
A.6	No damage apparent	Pass
A.7	No alternative loading points found	No Vulnerability identified
A.10	No damage apparent	Pass

Testing has demonstrated that due to the robustness and stiffness of the leaf core, changes of skins as detailed do not detract from the performance of the doorsets. The increased thickness of the leaf to 54mm enhances these characteristics.

In addition the doorset performance is not diminished when the two frames and lock types are interchanged

We are confident that the variations detailed will not compromise the performance of the doorset.

5 Conclusion

It is our opinion that if the doorset design detailed in this assessment, subject to the proviso stated in clause 7 of this report, were to be tested in accordance with the test programme (Ref. Chilt/P03037) it would achieve the same classification.

6 Declaration by applicant

- 1) We confirm that the component or element of structure, which is the subject of this assessment, has not to our knowledge been subjected to the test programme against which this assessment is being made.
- 2) We agree to withdraw this assessment from circulation should the component or element of structure be subject to the test programme against which this assessment is being made.
- 3) We are not aware of any information that could adversely affect the conclusions of this assessment.
- 4) If we subsequently become aware of any such information we agree to ask the assessing authority to withdraw the assessments.

Signed:

Name:

(For and on behalf of Pacific Rim Wood (UK) Ltd

7 Limitations

The following limitations apply to this assessment.



- 1) This assessment addresses itself solely to the elements and subjects discussed and does not cover any other criteria. All other details not specifically referred to should remain as tested or assessed.
- 2) This assessment is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available, CIF reserves the right to withdraw the assessment unconditionally but not retrospectively.
- 3) This assessment has been carried out following the principles of CDA01 Guidance on the methodology for testing and assessing hinged doorsets.
- 4) Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
- 5) This assessment relates only to those aspects of design, materials and construction that influence the performance of the elements under test conditions. It does not purport to be a complete specification ensuring fitness for purpose and long term serviceability. It is the responsibility of the client to ensure that the element is suitable for its intended purpose.

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8 Validity

- 1) The assessment is valid for a period of five years from the date of issue after which time it is recommended that it be re submitted.
- 2) This assessment report is not valid unless it incorporates the declaration given in section 6 duly signed by the applicant.

	Prepared by:	Checked by:
Signature:		
Name:	Paul Andrews	Vincent Kerrigan
Title:	Product Assessor	Principal Consultant

17 February 2006

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