

Test Report 8572674.

Captiv Fenestration / Prominance UPVC Profiles


Introduction.

This report has been prepared by Errol Creary and relates to the activity detailed below:

Job/Registration Details	Client Details
Job number: 8572674 Job type: Testing Samples Submitted Start Date: 25/07/2016 Test type: Direct Sample ID: 10164761 10165196 10173643 Registration: NA Protocol: NA Quality system: NA Registration: NA Protocol: NA Quality system: NA	Captiv Fenestration Appanaikenpatti, Sulur Coimbatore Tamilnadu 641402 India

The report has been approved for issue by Mark Manito – Team Manager

This issue supersedes all previous issues. The amendment giving rise to this issue of the Report can be ascertained by contacting the authorizing signatory.

Approved For Issue	
	Issue Date: 12 September 2017

Objectives.

Direct test

Product Scope.

PC 62-US-04

Report Summary.

The samples were received on 25 July 2016 and the testing was started on 25 July 2016.

The samples submitted complied with the requirements of the test work conducted.

Test Samples.

Sample Id	ER Number	Description
1	PC 62-US-04	Casement Inward Door Sash

Description of Test Samples.

Sample Description
1 off Main Profile(inc 1 off PAS 23 & PAS 24 door profile)
4 off 250mm (+10/-10) lengths
2 off 200mm (+10/-10) lengths
12 off 300mm (+/-5mm) lengths
1 off 1000mm (+10/-10) lengths
10 off welded 90° corners with 500mm long legs "I" and "V" values for each welded profile

Test Requirements.

BS EN 12608 Direct

Clause	Requirements	
5.	Requirements	
5.1	Materials	
5.1.3	Material characteristics	
	Vicat softening temperature	PASS
	Charpy Impact strength	PASS
	Flexural modulus of elasticity	PASS
	Tensile impact strength at 23 C	PASS
5.2	Appearance	PASS
5.3	Dimensions and tolerances	
5.3.2	Thickness of walls of main profile	PASS
5.3.3	Tolerances on other dimensions	PASS
5.3.4	Deviation from straightness of main profiles	PASS
5.4	Mass of main profiles	PASS
5.5	Heat reversion	PASS
5.6	Resistance to impact of main profiles by falling mass	PASS
5.7	Behaviour after heating at 150 C	PASS
5.8	Weldability	PASS

Glossary of Terms.

PASS: Complies. Tested by BSI engineers at BSI laboratories.

PASS1: Complies. Witnessed by BSI engineers in manufacturers laboratory.

PASS2: Complies. Tests carried out by third party lab; results accepted by BSI.

PASS*: Report resulted in uncertainty and states that Compliance is more probable than non-compliance.

FAIL: Non compliance – Product does not meet the requirements of this clause.

FAIL*: Report resulted in uncertainty and states that Non-compliance is more probable than compliance.

N/A: Not applicable to design under consideration.

N/T: Not tested due to similarity to previously tested item; reference earlier test report.

Conditions of Issue.

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BS EN 12608 Direct

Test Results.

CLAUSE

5. REQUIREMENTS

5.1 Materials

5.1.3 Physical Properties

Material characteristics

	Specified	Actual	Assessment
Vicat softening temperature			
Annex A.4.1 (BS EN ISO 306:1997)			
Vicat softening temperature (°C)	75 min	80.6	Pass
Samples taken from profile PC 62-US-04			
Charpy Impact strength			
Annex A.4.2 (See BS EN ISO 179-2:1999)			
Arithmetic mean (kJ/m ²)	20 min	20.94	Pass
Standard deviation (kJ/m ²)	-	9.4	
Co-efficient of variation (%)	-	45.37	
Samples taken from profile PC 62-US-04			
Mean for 6 brittle (P) fractures			
Arithmetic mean (kJ/m ²)	20 min	74.50	Pass
Standard deviation (kJ/m ²)	-	2.58	
Co-efficient of variation (%)	-	3.46	
Samples taken from profile PC 62-US-04			
Mean for 4 ductile (P) fractures			
Flexural modulus of elasticity			
Annex A.4.3 (BS EN ISO 178:2003)			
Mean flexural modulus of elasticity (MPa)	2200 min	2967.5	Pass
Samples taken from profile PC 62-US-04			
Tensile impact strength at 23°C			
Annex A.4.4 (BS EN ISO 8256:1997)			
Arithmetic mean (kJ/m ²)	600 min	664.30	Pass
Standard deviation (kJ/m ²)	-	74.85	
Co-efficient of variation (%)	-	11.27	
Samples taken from profile PC 62-US-04			

Test Results (Continued).

CLAUSE

5. REQUIREMENTS

5.2 Appearance

The colour of the profiles shall be the same and uniform when viewed by normal vision or corrected vision at a range of 1m, in 45° north sky light viewing perpendicular to the surface in accordance with EN ISO 105-A01:1995 or with an equivalent artificial source of light. The surfaces of the profiles shall be smooth, flat and free from pitting, impurities, cavities and other surface defects. The edges of the profiles shall be clean and burr-free.

Profile code
PC 62-US-04

Assessment
Pass

Test Results (Continued).

CLAUSE

5. REQUIREMENTS (CONTINUED)

5.3 Dimensions and tolerances

5.3.1 Nominal shape

The cross-section of the profiles shall conform to the nominal profile. The tolerances of the external dimensions of the profile with respect to the nominal profile shape shall be in accordance with Table 4

5.3.2 Thickness of walls of main profile

The thickness of the walls of the main profile according to Figure 2 shall be declared by the manufacturer

5.3.3 Tolerances on other dimensions

The critical dimensions of main profiles other than the thickness of the external walls and of auxiliary profiles as well as their tolerances shall be specified by the manufacturer

Profile code: PC 62-US-04

Class A

See drawing on page 14

Manufacturer's drawing number: None

Issue date: None

Dimension	Actual measurement (mm)	Assessment
A	61.99	Pass
B	81.84	Pass
C	82.03	Pass
D	101.51	Pass
E	3.01	Pass
F	2.53	Pass

Test Results (Continued).

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5. REQUIREMENTS (CONTINUED)

5.3 Dimensions and tolerances (Continued)

5.3.4 Deviation from straightness of main profiles

When measured in accordance with the method described in Clause 6.2 the deviation from the straightness shall not be greater than 1mm for a length of 1m

Profile code	Sight surface	Specified	Actual	Assessment
PC 62-US-04	1	1 max	0.13	Pass
	2	1 max	0.29	Pass

Test Results (Continued).

CLAUSE

5. REQUIREMENTS (CONTINUED)

5.4 Mass of main profiles

When measured in accordance with the method described in Clause 6.3 the mass per metre length of main profiles shall not be less than 95% of the nominal mass per metre length

Profile code	Specified (%)	Actual (%)	Assessment
PC 62-US-04	95 min	100.6	Pass

Test Results (Continued).

CLAUSE

5. REQUIREMENTS (CONTINUED)

5.5 Heat reversion

5.5.1 Main profile

When tested in accordance with BS EN 479:1999 for each test specimen the heat reversion of the two largest opposing sight surfaces shall not be greater than 2.0%

The difference in heat reversion for each test specimen between these sight surfaces shall not be greater than 0.4%

5.5.2 Auxiliary profiles

When tested in accordance with BS EN 479:1999 the heat reversion for each test specimen shall not be greater than 3.0%, for glazing beads used externally, a limit of 2% max is recommended

Mean reversion

Profile code	Actual value	Assessment
PC 62-US-04	0.99	Pass
	1.01	Pass
	0.99	Pass

Variation between sight surfaces

Profile code	Sample code	Actual value	Assessment
PC 62-US-04	1	0.17	Pass
	2	0.02	Pass
	3	0.05	Pass

Test Results (Continued).

CLAUSE

5. REQUIREMENTS (CONTINUED)

5.6 Resistance to impact of main profiles by falling mass

When main profiles are tested in accordance with BS EN 477:1999 for the appropriate classification no more than one test specimen shall show rupture in the wall

For coextruded profiles the delamination of the coextruded layer is also considered as failure

Profile Codes	Class	Mass used (g)	Drop height (m)	Number failures out of 10
PC 62-US-04	11	1000	1.5	0

Test Results (Continued).

CLAUSE

5. REQUIREMENTS (CONTINUED)

5.7 Behaviour after heating at 150°C

When tested in accordance with BS EN 478:1999 the profiles shall show no defects. For coextruded profiles the delamination of the coextruded layer is also considered as failure

Profile code

PC 62-US-04

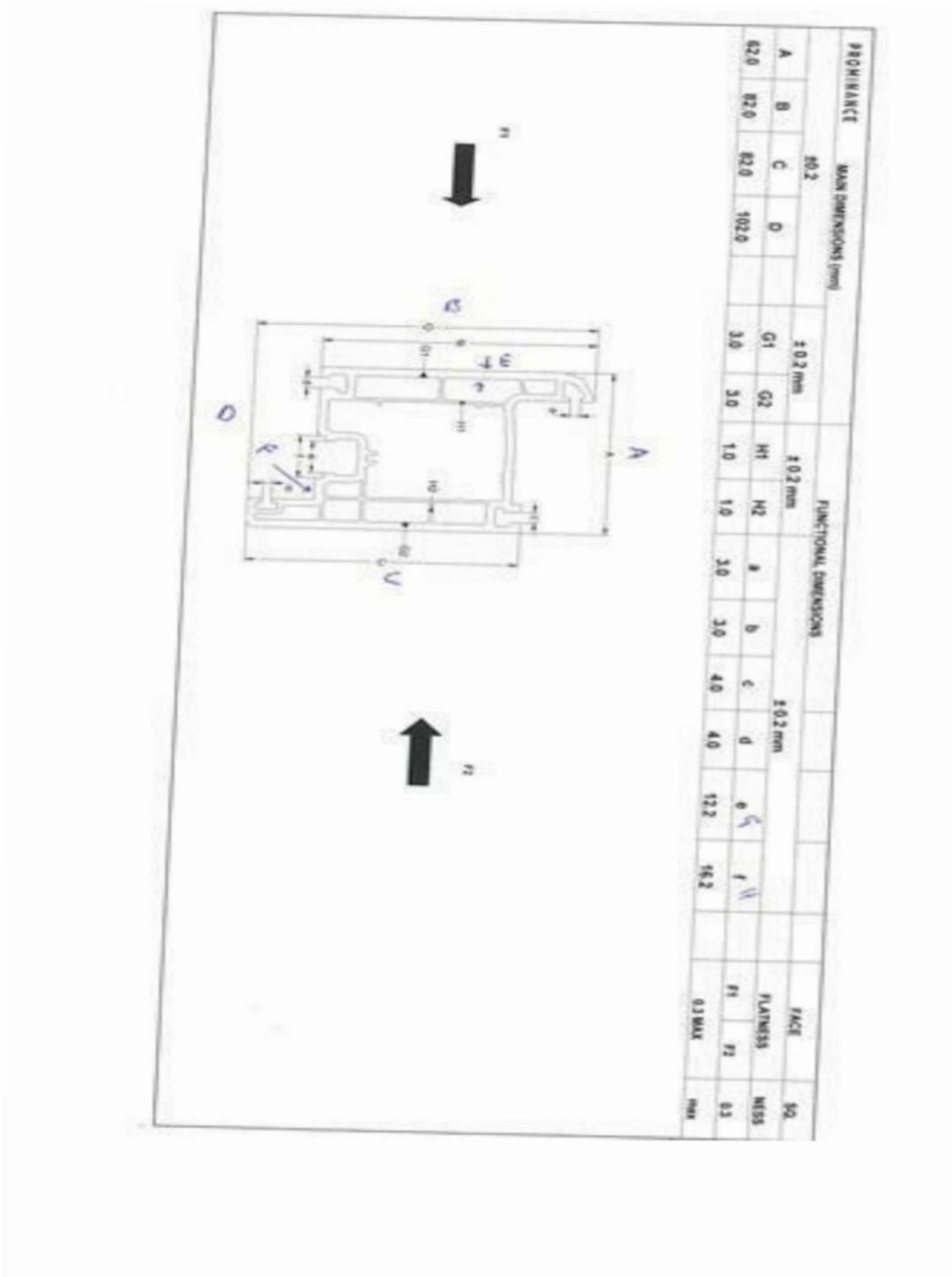
5.8 Weldability

When tested in accordance with EN 514:2000, the mean weld failure stress shall not be less than 25 MPa and no individual result shall fall below 20 MPa

Profile code	I (mm ⁴)	V (mm)	Sample No	Stress (MPa)	Assessment
PC 62-US-04	472276.44	31.7	1	24.34	Pass
			2	25.27	Pass
			3	26.36	Pass
			Mean	25.32	Pass

Note 'I' and 'V' values supplied by manufacturer.

Manufacturers Drawings.



Photograph of Samples.



End of Report