NAVIGA CERTIFICATION

CERTIFICATE

SERTİFİKA | ZERTIFIKAT | CERTIFICATE | CERTIFICAT | CERTIFICADO | СЕРТИФИКАТ | شهادة | 证书 | 인증서

ISO 9001:2008 Quality Management System

DOĞAN CAM PVC SANAYİ VE TİCARET A.Ş.

Organize Sanayi Bölgesi 21. Cad. No:1, ESKİŞEHİR

In accordance with NAVIGA procedures, it's hereby certified that the above company applies a management system in line with the above standard for the following scope.

Scope

MANUFACTURING AND SALES OF PVC RIGID SHEET, PVC SANDIWCH PANEL, PVC EXTERIOR DOOR PANEL, UPVC DOOR AND WINDOW PROFILE, PVC READY DOOR AND WINDOW, FLOAT GLASS, INSLATING DOUBLE GLASSES AND TEMPARED GLASS

Report No: 14Q154 Certificate Expiry Date: 01.04.2017

Certificate Reg. No: 1440271 First Certification Date: 02.04.2014

This certification has been completed according to NAVIGA's audit and certification procedures and is valid until surveillance audit (15.03.2015).

Certification Body

NAVİGA ULUSLARARASI BELGELENDİRME
VE EĞİTİM HİZ. LTD. ŞTİ.

TÜRKAK
Kalite Yönetim Sistemi
TS EN ISO/IEC 17021
AB - 0058 - YS

Istanbul, 02.04.2014

İşbu sertifika, Naviga'nın belgelendirme prosedür ve talimatlarına, yukarıdaki standardın gerekliliklerine uyulduğu sürece, yukarıdaki adres ve kapsam dahilinde geçerlidir.

NAVİGA ULUSLARARASI BELGELENDİRME VE EĞİTİM HİZMETLERİ LTD. ŞTİ.
Ali Rıza Gürcan cad. Metropol Center Kat: 11 No 46 Merter 34015 / İSTANBUL
Tel: 0212 482 96 56 Fax: 0212 482 94 24 www.navigaltd.com - info@navigaltd.com

TEST REPORT

TEST REPORT NUMBER : TURR140141190 DATE: 17 September, 2014

APPLICANT: **Doğan Cam Pvc Sanayi ve Tic. A.Ş.**

ADDRESS: Organize Sanayi Bölgesi 21.Cadde No:1 ESKİŞEHİR
FAX NO: 0222 236 11 26
Attention : Mustafa Günay (mgunay@doganglass.com)

SAMPLE DESCRIPTION
Sample 1 : One sample of PVC Door and window shape
Sample 2 : One sample of PVC Rigid panel

DATE IN : **10 / September /2014 (13:59)**

DATE OUT : **17 / September /2014**

REQUEST : In this test report, only Lead (Pb) test was performed according to 2011/65/EU Directive.

RESULTS : SEE ATTACHMENT

CONCLUSION :

Testing Item	Conclusion
Sample 1	PASS
Sample 2	PASS

Bora Şirinbilek
Coordinator

Neslihan Sözer
Chemical Laboratory Manager

TÜRKAK Test TS EN ISO/IEC 17025 AB-0716-T

Intertek Test Hizmetleri A.S.
Merkez Mahallesi Sanayi Cad. No.23 Altindag Plaza Yenibosna 34197 - ISTANBUL / TURKEY
Phone : +90.212. 496 46 46 Fax: +90.212. 452 80 55
e-mail : intertekcg.turkiye@intertek.com
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(A) TEST RESULT SUMMARY ACCORDING TO IEC 62321 : 2008
Electrotechnical Products-Determination of Levels of Six Regulated Substances

TESTING ITEM	**RESULT**	
	Sample	
	1	**2**
Cadmium (Cd) Content	NR	NR
Chromium VI (Cr+6) Content (ppm) (for non - metal)	NR	NR
Lead (Pb) Content	142 ppm	ND
Mercury (Hg) Content	NR	NR
Flame Retardants		
Polybrominated Biphenyls (PBB)	**NR**	**NR**
Monobromobiphenyl (MonoBB)	NR	NR
Dibromobiphenyl (DiBB)	NR	NR
Tribromobiphenyl (TriBB)	NR	NR
Tetrabromobiphenyl (TetraBB)	NR	NR
Pentabromobiphenyl (PentaBB)	NR	NR
Hexabromobiphenyl (HexaBB)	NR	NR
Heptabromobiphenyl (HeptaBB)	NR	NR
Octabromobiphenyl (OctaBB)	NR	NR
Nonabromobiphenyl (NonaBB)	NR	NR
Decabromobiphenyl (DecaBB)	NR	NR
Polybrominated Diphenyl Ethers (PBDE)	**NR**	**NR**
Monobromodiphenyl Ether (MonoBDE)	NR	NR
Dibromodiphenyl Ether (DiBDE)	NR	NR
Tribromodiphenyl Ether (TriBDE)	NR	NR
Tetrabromodiphenyl Ether (TetraBDE)	NR	NR
Pentabromodiphenyl Ether (PentaBDE)	NR	NR
Hexabromodiphenyl Ether (HexaBDE)	NR	NR
Heptabromodiphenyl Ether (HeptaBDE)	NR	NR
Octabromodiphenyl Ether (OctaBDE)	NR	NR
Nonabromodiphenyl Ether (NonaBDE)	NR	NR
Decabromodiphenyl Ether (DecaBDE)	NR	NR

Remarks : ppm=Parts per million based on dry weight of sample
µg/cm²=Microgram per square centimetre
mg/kg with 50 cm²=Milligram per kilogram with 50 square centimetre
ND =Not detected NA =Not applicable NR =Not requested

****

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(B) REQUIREMENT:

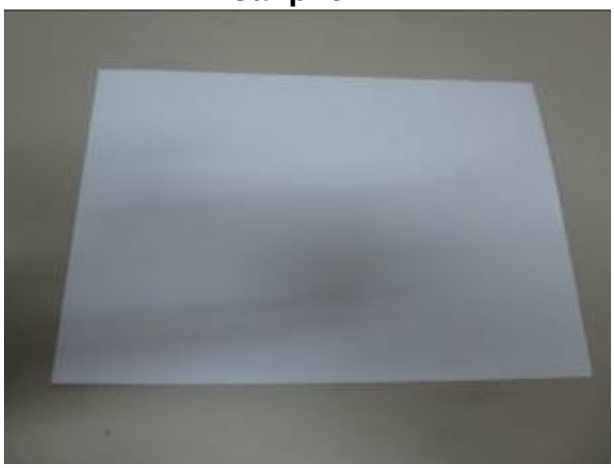
SUBSTANCE	LIMITS
Cadmium (Cd) Content	0.01 % (100 ppm)
Chromium VI (Cr+6) Content (ppm) (for non metal)	0.1 % (1000 ppm)
Lead (Pb) Content	0.1 % (1000 ppm)
Mercury (Hg) Content	0.1 % (1000 ppm)
Flame Retardants	0.1 % (1000 ppm)

(C) TEST METHOD :

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With reference to IEC 62321:2008,by acid digestion and determined by ICP-OES	2 ppm
Lead (Pb)Content	With reference to IEC 62321:2008,by acid digestion and determined by ICP-OES	2 ppm
Mercury (Hg)Content	With reference to IEC 62321:2008,by acid digestion and determined by ICP-OES	2 ppm
Chromium VI (Cr6+)(For non-metal)	With reference to IEC 62321:2008,by alkaline digestion and determined by UV-VIS spectrophotometer	1 ppm
Chromium VI (Cr6+)(For metal)	With reference to IEC 62321:2008,by SPOT TEST	1 ppm (IN TESTING SOLUTION)
Chromium VI (Cr6+)(For metal)	With reference to IEC 62321:2008 ,by boiling water extraction and determined by UV-VIS spectrophotometer	0.02 mg/kg with 50 cm^2 (IN TESTING SOLUTION)
PBBs/PBDEs	With reference to IEC 62321:2008,by solvent extraction and determined by GC/MS and HPLC	5 ppm

Sample 1

Sample 2



END OF TEST REPORT

Intertek Test Hizmetleri A.S.
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PfB Prüfzentrum für Bauelemente
Dipl.-Ing. (FH) Rüdiger Müller

Fenster · windows
Rollläden · shutters
Türen + Tore · doors
Fassaden · curtain walling
Baubeschläge · building hardware

April 07, 2015 RM/YA

TEST REPORT NO. 14/09-A002TR-B1

Version 1.en

PfB-Internal-No. 15/04A138

Initial type testing (ITT) of performance characteristics in accordance with EN 14351-1 :2006 + A1 : 2010 "Windows and doors - Product standard, performance characteristics – Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics – German version EN 14351-1:2006 + A1:2010"

Order No.	14/09-A002TR
Applicant	Doğan Cam PVC San.ve Tic.A.Ş. Organize Sanayi Böl. 21.Cad. No:1 Eskişehir
Product type	Inward opening only turn single casement door with aluminium threshold, PVC, panel
Product name	**Panelli PVC Door**
Conducted tests	- Air Permeability - Water Tightness - Resistance to Wind Load - Load-bearing Capacity of Safety Devices
Responsible test person	Dipl. Ing. (FH) Rüdiger Müller

This report consists of 7 pages. The following are included as appendix:

- 1 Data sheet air permeability	(attachment 1 of 10)
- 1 Data sheet water tightness	(attachment 2 of 10)
- 1 Data sheet resistance to wind load	(attachment 3 of 10)
- 6 Images of test sample	(attachment 4 to 6 of 10)
- 7 Pages technical documentation	(attachment 7 to 10 of 10)

Content

1 Introduction and Scope

The customer Doğan Cam confirmed the order by mailing the submission form on the September 15, 2014 to **PfB** Turkey, Ataturk Oganize Sanayi Bolgesi 10045 Sokak No 7, 35620 Çiğli – Izmir, Turkey. The order includes the Initial Type Test (ITT) for the performance according EN 14351-1 : 2006 + A1 : 2010. The former test was performed in collaboration between **PfB** Turkey and the notified body inspection authority Prüfzentrum für Bauelemente (**PfB**) on 25 September 2014.

The tests were conducted according below standards:

- EN 1026 : 2000-06 "Windows and doors – Air permeability – Test method";
- EN 1027 : 2000-06 "Windows and doors – Water tightness – Test method";
- EN 12211 : 2000-12 "Windows and doors – Resistance to wind load – Test method";

The test results were classified according to below standards:

- EN 12207 : 2000-06 "Windows and doors – Air permeability –Classification";
- EN 12208 : 2000-06 "Windows and doors – Water tightness –Classification";
- EN 12210 : 2003-08 "Windows and doors – Resistance to wind load – Classification";
- EN 14351-1 : 2006 + A1 2010 "Windows and doors – Product standard";

2 Test Sample

2.1 Sampling and Test Sample Labelling

The test sample was delivered to **PfB** on 26 September 2014 by Doğan Cam. The test sample was delivered mounted in a steel sub frame (cross section 50 mm x 100 mm). The jointing between door frame and mounting frame was sealed by practical guidance.

Test sample	Labelling by customer	Labelling by **PfB**
Inward opening only turn single casement door with aluminium threshold, PVC, panel	**Panelli PVC Door**	14/09-A002TR-P1

2.2 Technical Documentation

On 26 February 2015 the customer completed drawings and technical fact sheets with regard to the test sample submitted by e-mail. They have been provided with a **PfB** endorsement and attached to this test report. The applicant is responsible for the correctness and accuracy of the statements. These statements were reviewed only at random by **PfB:**

- "Front View" (attachment 7)
- "Profiles" (attachment 8)
- "Parts" (attachment 9)
- "Section View" (attachment 10)

2.3 Technical Data of the Test Sample

Test sample no. 14/09-A002TR-P1

Inward opening only turn single casement door with aluminium threshold, PVC, panel:

Total outside dimension (w x h):	980 mm x 2080 mm,
Casement dimensions (w x h):	912 mm x 2035 mm,
Profile cross section:	Frame approx. 70 mm x 65 mm,
	Casement approx. 70 mm x 85 mm,
Sealing:	TPE-TPV combination
Closing/Locking system:	PAVO
- right/left	4 flat pin on handle side,
- top/bottom	none,
- fastening	1 screw per fixing plate,
Glazing/infill:	24 mm panel, dry panel sealing.

More details of the configuration of the test sample are given in 2.2 Technical Documentation.

2.4 Documentation of Test Sample

For documentation of the sample digital photos were taken, which will be archived together with the sample pieces of the gaskets for 10 years by **PfB**.

3 Used Test Equipment and Gauges

Following equipments are used for the mentioned tests:

- Test wall with Inventory number (Producer: Holten-Prüftechnik GmbH) connected with software for data acquisition for control and application of air pressure, measurement of air leakage rate and water spray with a controlled rate,	35001
- 3 length measurement potentiometer (Mitutoyo Absolute).	35101, 35102, 35103,
- Load-bearing capacity of safety devices test aparatus	35020

The measurement tolerance of the test-wall is in the limits of the requirements of the standard. The latest calibrations were done on 14th May 2014.

4 Test

4.1 Person in Charge and Date of the Test

Person in charge	Dipl.-Ing. (FH) Rüdiger Müller
Test person	Yigit Altug
Date	25.09.2014
Person present from the customer	None

4.2 Description of the Test and Test Results

4.2.1 Air Permeability Test according to EN 1026

On the outside face of the test sample first the positive pressure (over pressure) and then the negative pressure (suction) was applied. In order to determine the air leakage rate of the test sample, the pressure was slowly increased by steps of 50 Pa up to 300 Pa after this the steps of 150 Pa were applied up to 600 Pa. The leakage rates at the pressure steps were measured and recorded for 10 seconds.

The equation Vo = Vx * 293/(273 + Tx) * Px /(101,3) according EN 1026 was applied in order to convert the air amount to the 'Normal volume' under 'Normal conditions' and atmospheric pressure, where Tx is the air temperature in the measurement column and Px the pressure of the air pressure during the test.

The results of the tests are given in table of the Data sheet 1: Air Permeability according to EN 1026 (attachment 1).

In the mentioned data sheets the measured values are converted to 'normal conditions' and related to the joint length and the surface area. Results were represented in given charts.

4.2.2 Water Tightness Test according to EN 1027

The test sample is tested according to Method A mentioned in standard EN 1027 (single water spraying line with 3 nozzles). For 15 minutes water sprayed to the surface of the test sample with no pressure.

The details are recorded and represented in Data sheet 2: Water tightness according to EN 1027 (attachment 2).

4.2.3 Resistance to Wind Load Test according to EN 12211

After preparation, 3 pushes were applied according to standard. Afterwards, resistance to wind load according EN 12210 Table 1 were increased in steps of 400 Pa according to the wind load classes. After dismantling the potentiometers, 50 cycles of consecutive positive and negative pressure tests with 1000 Pa is applied. In the following air permeability test according to EN 1026 no significant change was observed.

In the security test is finalized with pressure of ± 3000 Pa. No damage or operational difference has occurred after the safety tests. The test results are represented in Data sheet 3: Resistance to wind load according to EN 12211 (attachment 3).

4.2.4 Load-bearing Capacity of Safety Devices according EN 14351-1

The testing of the safety device is carried out with a load of 350 N for 60 s. No malfunction was detected at the test test sample.

5 Classification of the Test Results

Based on the test results according to paragraph 4.2.1 to 4.2.4 the following classification can be applied.

Test report no. 14/09-A002TR-B1 Test sample no. 14/09-A002TR-P1 Inward opening only turn single casement door	Air Permeability EN 12207	Water Tightness EN 12208	Resistance to Wind Load EN 12210	Load bearing Capacity of Safety Devices EN 14351-1
Tested as delivery	Class **3**	Class **7A**	**C5/B5**	**complied**

6 Application Range

According to EN 14351-1 the test results can be applied to similar door structures (Annex E of the standard, clause 3.4) with the same dimension or smaller.

For resistance to wind load the results defined in this test report might be applied to single sash door which satisfy the similar design conditions with maximum height 2080 mm and width 980 mm.

The air permeability and water tightness characteristics are exceptions to the above general rule. In this case, the classes achieved also apply to door assemblies of the same type of opening with smaller sizes and larger sizes up to + 50% compared to the size tested.

Conditions

For smaller door elements, the number of closing points may be reduced as long as their distance is not increased compared to the test sample. Furthermore attention has to be paid to the corners of the casement where the distance of the closing points may not significantly vary from the tested door.

7 General

This Test Report is intended for the applicant only and must not be published, wholly or in part, without prior permission of both the applicant and **PfB**.

The original document will be sent to the customer. The customer also receives a copy of the document in pdf format. One copy remains with **PfB**.

The results may only be applied exclusively on the tested test sample. Test results may be used for similar doors only if structure, material, components and production procedure are the same as the tested door.

PfB declares that they can not be claimed for recourse with regard to the content of the report.

This report is valid as long as the Standard EN 14351-1: 2006 + A1 : 2010 is in force and no essential changes of the structure and/or production procedure has been taken place.

Dipl. Ing. (FH) Rüdiger Müller
Head of Institute

Stephanskirchen
April 07, 2015

PfB Prüfzentrum für Bauelemente
Dipl.-Ing. (FH) Rüdiger Müller

Test report No. 14/09-A002TR-B1 of April 07, 2015, Version 1.en
PfB-Internal-No. 15/04A138
Doğan Cam PVC San.ve Tic.A.Ş., Eskişehir

DataSheet 1: Air permeability EN 1026

Sample description: Inward opening only turn single casement door with aluminium threshold, PVC, panel

Test date: 25.09.2014

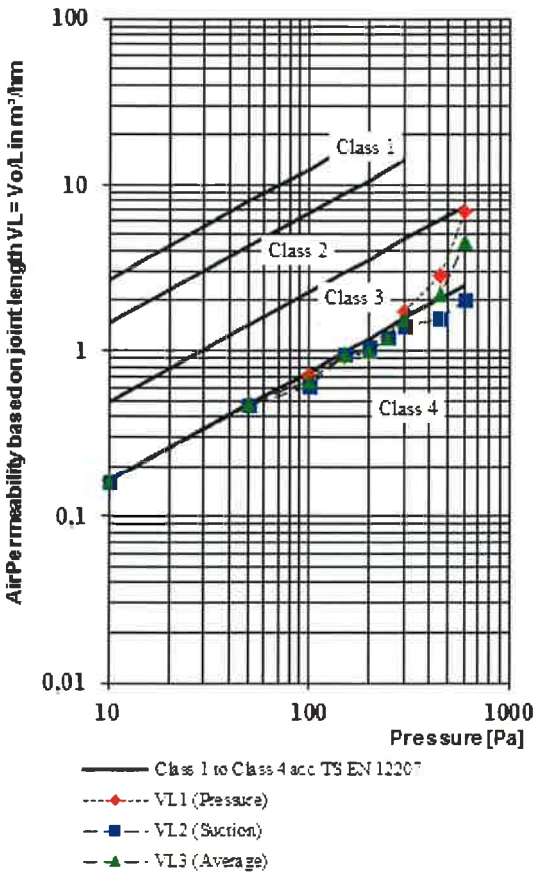
Sample number 14/09-A002TR-P1 Condition: Tested as delivery

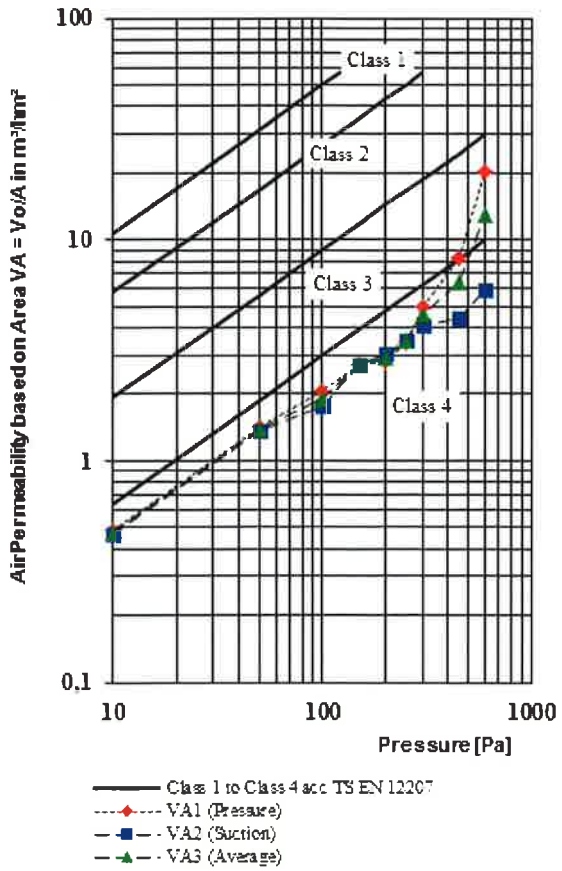
Measurements [mm]: Outer dimensions width: 980
Outer dimensions height 2080
Casement dimension wic 912
Casement dimension hei 2035

Relative humidity: 39 %
atmospheric pressure: 1013 hPa
Temperature: 22 °C
Joint length L: 5,89 m
Area A: 2,04 m²

Table : airpermeability V_0 (corrected to normal conditions: 293 K, 101,3 kPa)

Test pressure difference (Pa)		10	50	100	150	200	250	300	450	600
V1 (pressure)	(m³/h)	1,0	2,9	4,2	5,5	5,7	7,0	10,2	16,9	41,0
V2 (Suction)	(m³/h)	0,9	2,8	3,6	5,5	6,2	7,1	8,4	9,1	12,0
V3 (average)	(m³/h)	1,0	2,8	3,9	5,5	5,9	7,1	9,3	13,0	26,5
airpermeability based on jointlength										
V_L1 (Druck)	(m³/hm)	0,17	0,49	0,71	0,93	0,96	1,19	1,72	2,87	6,96
V_L2 (Sog)	(m³/hm)	0,16	0,47	0,61	0,94	1,04	1,21	1,42	1,54	2,03
V_L3 (Mittelwert)	(m³/hm)	0,16	0,48	0,66	0,94	1,00	1,20	1,57	2,21	4,50
airpermeability based on area										
V_A1 (Druck)	(m³/hm²)	0,48	1,40	2,06	2,70	2,79	3,44	4,98	8,30	20,14
V_A2 (Sog)	(m³/hm²)	0,46	1,36	1,77	2,72	3,02	3,49	4,10	4,45	5,88
V_A3 (Mittelwert)	(m³/hm²)	0,47	1,38	1,91	2,71	2,90	3,47	4,54	6,38	13,01





PfB Prüfzentrum für Bauelemente
Dipl.-Ing. (FH) Rüdiger Müller

Test report No. 14/09-A002TR-B1 of April 07, 2015, Version 1.en
PfB-Internal-No. 15/04A138
Doğan Cam PVC San.ve Tic.A.Ş., Eskişehir

DataSheet 2: Water tightness EN 1027

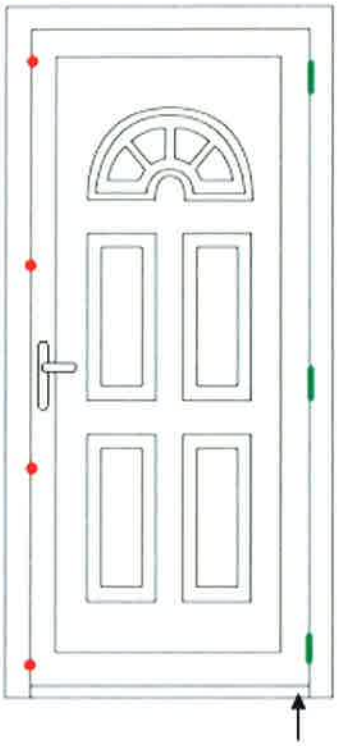
Test sample description: Inward opening only turn single casement door with aluminium threshold, PVC, panel

test date 25.09.2014

Sample number 14/09-A002TR-P1

Measurements [mm]:
Outer dimensions width: 980
Outer dimensions height: 2080
Casement dimension wic: 912
Casement dimension hei: 2035

Relative humidity: 39 %
atmospheric pressure: 1013 hPa
Temperature: 22 °C
Joint length L: 5,89 m
Area A: 2,04 m²



Indicating Water leakage ↑

Table 1:

Testtype A (unprotected)	3 nozzles per row								Testdate: 25.09.14
Pressure (Pa)	0	50	100	150	200	250	300	450	
Time t (min)	15	5	5	5	5	5	5	5	
Pass? yes / no	YES	YES	YES	YES	YES	YES	YES	no	
TS EN 12208, Class	1A	2A	3A	4A	5A	6A	7A	8A	
Comment: Water breakthrough:	Water leakage from hinge side bottom corner at first minute of 450 Pa								
Changes:	tested as delivery								

PfB Prüfzentrum für Bauelemente
Dipl.-Ing. (FH) Rüdiger Müller

Test report No. 14/09-A002TR-B1 of April 07, 2015, Version 1.en
PfB-Internal-No. 15/04A138
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Datasheet 3: Resistance to windload (deflection) EN 12211

Sample description: Inward opening only turn single casement door with aluminium threshold, PVC, panel
Note: Test date: 25.09.2014

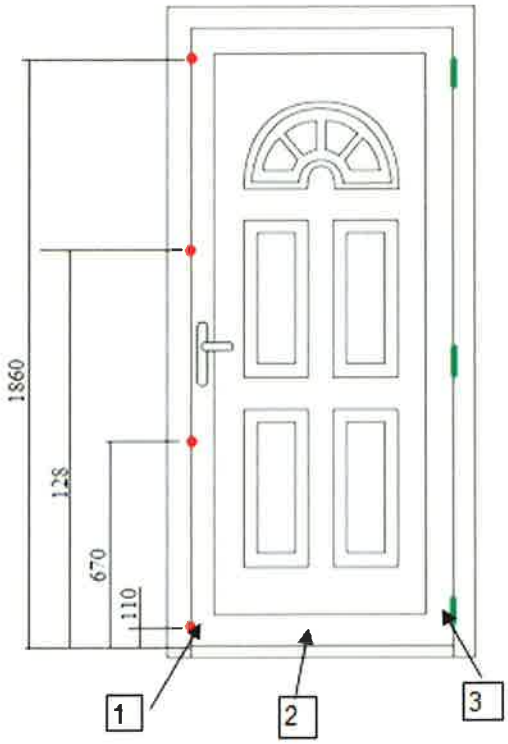
Sample number 14/09-A002TR-P1

Measurements [mm]:
Outer dimensions width: 980
Outer dimensions height 2080
Casement dimension wic 912
Casement dimension hei 2035

Relative humidity: 39 %
atmospheric pressure: 1013 hPa
Temperature: 22 °C
Joint length L: 5,89 m
Area A: 2,04 m²

Frontal view sketch

critical length 1230 mm



● = Fixing point
→ = Measurement point
1 = Measurement point number

Table 1: Test of frontal deflection

	Frontal deflection				Frontal deflection			
	Measuring point in [mm], pressure				Measuring point in [mm], suction			
Pressure/Suction [Pa]	Meas. pnt. 1	Meas. pnt. 2	Meas. pnt. 3	f	Meas. pnt. 1	Meas. pnt. 2	Meas. pnt. 3	f
400	0,28	0,86	0,50	0,47	-0,20	-0,66	-0,41	-0,36
800	0,70	1,95	1,10	1,05	-0,39	-1,19	-0,88	-0,56
1200	1,32	3,42	1,83	1,85	-0,60	-1,65	-1,35	-0,68
1600	2,33	5,35	2,78	2,80	-0,87	-2,18	-1,78	-0,86
2000	3,28	6,70	3,45	3,34	-1,08	-2,50	-2,15	-0,89
Border Values	A (L/150)	B (L/200)	C (L/300)		A (L/150)	B (L/200)	C (L/300)	
	8,2	6,2	4,1		8,2	6,2	4,1	

Image 1:
Test sample No.14/09-A002TR-P1, on the test rig.

Image 2:
Test sample No.14/09-A002TR-P1, deflection gauges placed on the sample for wind load testing.

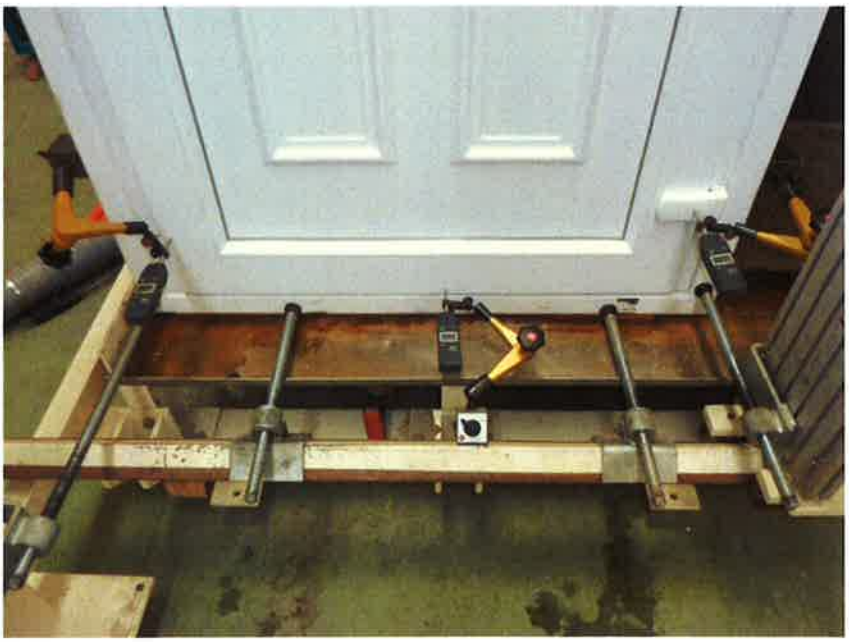


Image 3:
Test sample No.14/09-A002TR-P1, bottom corner detail.

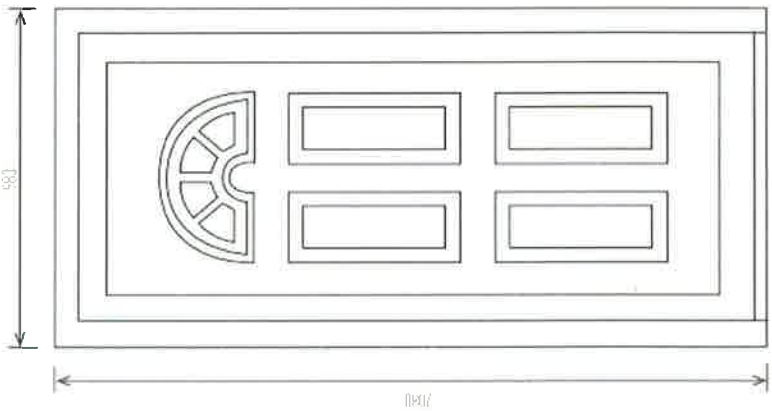
Image 4:
Test sample No.14/09-A002TR-P1, water leakage.

Image 5:
Test sample No.14/09-A002TR-P1, bottom corner detail.

Image 6:
Test sample No.14/09-A002TR-P1, top of casement profile.

INTERPEN

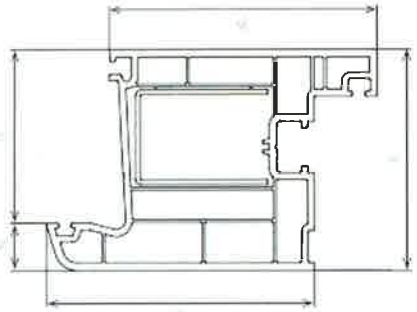
A Plan Thermo 01 (Panelli PVC Kapı)



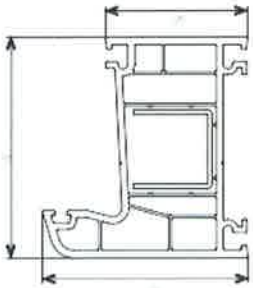
INTERPEN

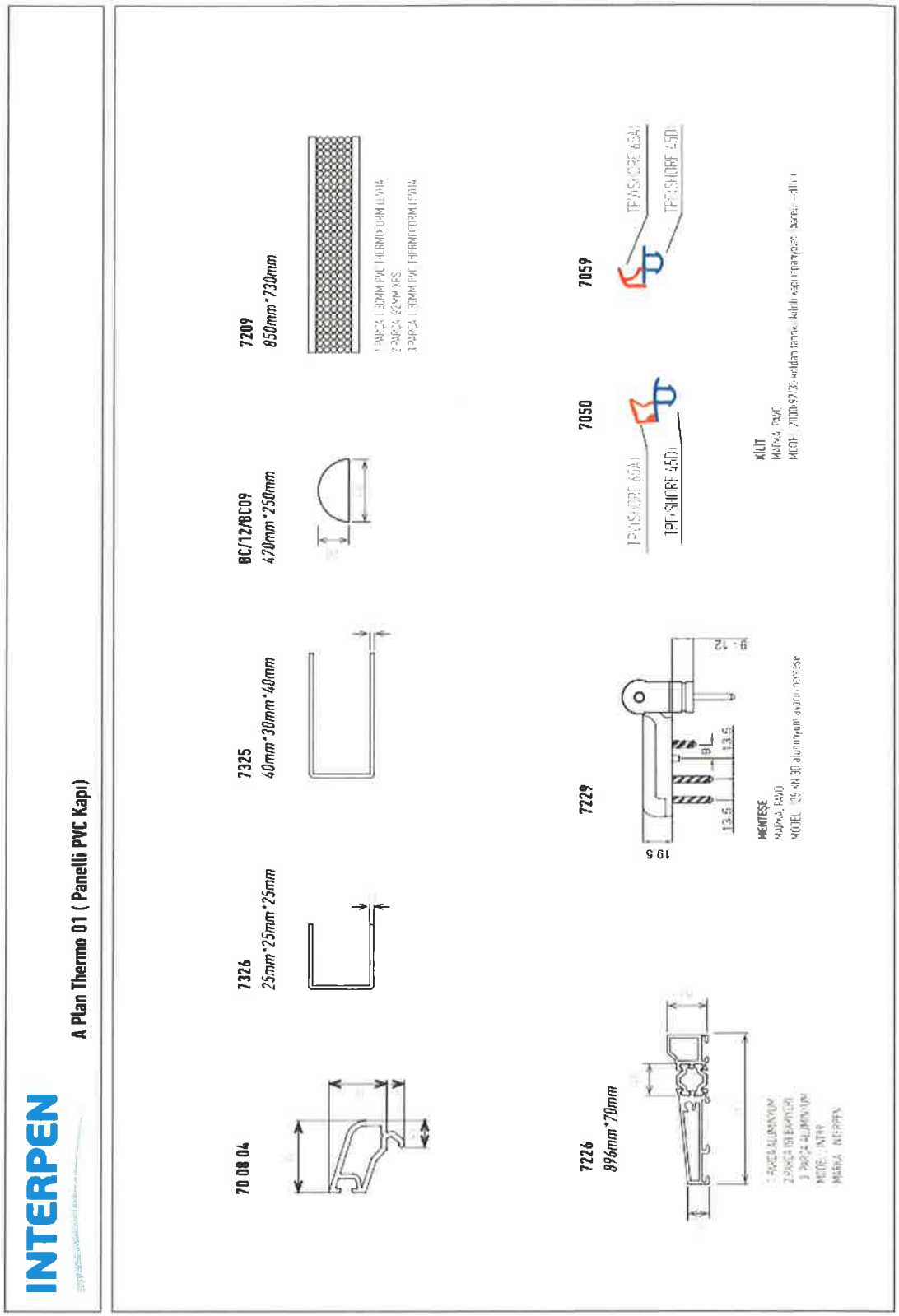
A Plan Thermo 01 (Panelli PVC Kapı)

70 05 01



70 01 01




INTERPEN
A Plan Thermo 01 (Panelli PVC Kapı)
7209
850mm*730mm
BC/12/BC09
470mm*250mm
7325
40mm*30mm*40mm
7326
25mm*25mm*25mm
70 08 04
7059
7050
7229
7226
896mm*70mm

INTERPEN

A Plan Thermo 01 (Panelli PVC Kapı)