

Test report no. 69961/05-III

Customer: EGE PROFIL TICARET VE SANAYI A.S.
Atatürk Organize Sanayi Bölgesi
10003 Sokak Nr.: 5
35510 Cigli-Izmir
TURKEY

Production plant: 35510 Cigli-Izmir
TURKEY

Test: Testing and classification of window profiles
made of PVC-U according to EN 12608:2003

System: ZENDOW

Designation of profile: ZENDOW ORTA KAYIT
(ZENDOW TRANSOM)

Designation of formulation: 9610101

Basis of stabilisation: lead

Manufacturer of compound: EGE-Profil A.S., 35510 Cigli-Izmir, Turkey

Test samples received on: 2005-09-16

Test period: 2005-10-06 to 2005-10-19

Result: The requirements according to EN 12608 were met.

Classification: EN 12608 - S - II - B

This test report consists of 5 pages and 1 enclosure.

Würzburg, 2005-12-15

Br/ste *chr*

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1. Order

The company EGE PROFIL TICARET VE SANAYI A.S., Atatürk Organize Sanayi Bölgesi, 10003 Sokak No. 5, 35510 Cigli - Izmir, TURKEY, ordered the following test to be carried out at SKZ - TeconA GmbH in their E-Mail dated September 20, 2005: Testing and classification of window profiles made of PVC-U according to EN 12608:2003

2. Test material

SKZ - TeConA GmbH had the following test material at their disposal on September 16, 2005:

6 x 1 m and 3 welded corners, sash profile, made of PVC-U

Profile designation: ZENDOW ORTA KAYIT
Profile marking: no marking

3. Execution of test

The tests described below were carried out according to EN 12608, unplasticised polyvinyl-chloride (PVC-U) profiles for the fabrication of windows and doors, classification, requirements and test methods, German version, 2003 edition.

Usually our reports are based on accredited standards. The list of all accredited standards is shown on the homepage at www.skz.de.

3.1 Material characteristics

The material characteristics were tested according to EN 12608, annex A. The test results were taken over from test report no. 64918/04, issued by SKZ - TeConA GmbH.

3.2 Appearance

The profile sections sent were subjected to visual inspection. The surface 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.

3.3 Dimensions

The dimensional test and the test in respect of deviation from straightness were carried out according to item 6.2, test method.

For the dimensional test of the profile sections, the requirements according to item 5.3 and additional features from the profile drawing were taken into consideration.

3.4 Determination of mass

The determination of the mass of the profile sections was carried out according to item 6.3, test method.

3.5 Heat reversion

The test was carried out according to EN 479 on 3 samples.

3.6 Resistance to impact by falling mass

The test was carried out according to EN 477 on 10 samples.

The samples, stored at $-10\text{ }^{\circ}\text{C}$, were tested according to classification II (falling mass 1000 g, falling height 1500 mm).

3.7 Behaviour after heating at $150\text{ }^{\circ}\text{C}$

The test was carried out according to EN 478 on 3 samples.

3.8 Weldability

The weldability test was carried out according to EN 514, compression bending test. The breaking stress was determined in N/mm^2 .

3.9 Weathering resistance

The colour fastness and weathering resistance tests were carried out according to EN 513, method 2, simulation of severe climate, climate zone S. The test results were taken over from test report no. 50127/02, as this is a test in respect of a specific formulation.

In deviation of the specifications of EN 513, samples with a notch radius of 0.1 mm were tested.

Our experience has shown that the results achieved by samples with a notch radius of 0.1 mm can be transferred to tests with a notch radius of 0.25 mm.

4. Results

4.1 Material characteristics

The requirements according to EN 12608, annex A, were met.

The test results have been documented in test report no. 64918/04, issued by SKZ - TeConA GmbH.

With respect of the classification of Charpy impact strength, the requirement of at least 20 kJ/m² was met.

4.2 Appearance and condition as delivered

The profiles were smooth, the edges were clean and burr-free. No lines, streaks, stains or other surface defects were found.

4.3 External dimensions and functional dimensions as well as wall thickness class B and deviation from straightness in mm:

Measuring point	Actual value	Required value	Deviation
1	79.3	79.5 ± 0.5	-0.2
2	39.7	40.0 ± 0.5	-0.3
3	69.8	70.0 ± 0.3	-0.2
4	2.5	2.5 ± 0.3	0.0
5	2.5	2.5 ± 0.3	0.0
6	4.3	4.5 ± 0.3	-0.2
7	4.2	4.5 ± 0.3	-0.3
Wall thickness	2.8	≥ 2.5	---
Wall thickness	2.2	≥ 2.0	---
Wall thickness	2.2	≥ 2.0	---
Wall thickness Gasket groove	<u>1.9</u> *)	≥ 2.0	<u>-0.1</u>

*) In deviation of the wall thickness requirements, the wall thickness in the gasket groove area is 1.9 mm. For such cases, a transition period until December 31, 2009 for adapting extrusion tools is provided in the Standard and the minimum wall thickness in the gasket groove is 1.2 mm.

Deviation from straightness in mm/m Actual value: 0.2 Required value: ≤ 1

4.4 Mass per meter in g/m Actual value: 1360 Required value: 1230
Deviation from required value in % Actual value: 10.1 Required value: ≥ -5

4.5 Heat reversion

	Heat reversion in % Required value: ≤ 2.0						Difference between sight surfaces		
	Sight surface 1			Sight surface 2			Required value: ≤ 0.4		
Sample	1	2	3	1	2	3	1	2	3
	1.4	1.4	1.4	1.8	1.7	1.7	0.4	0.3	0.3

4.6 Resistance to impact by falling mass (class II, falling height 1500 mm)

Breaking rate in % Actual value: 0 Required value: ≤ 10

4.7 Behaviour after heating: no complaints

4.8 Weldability

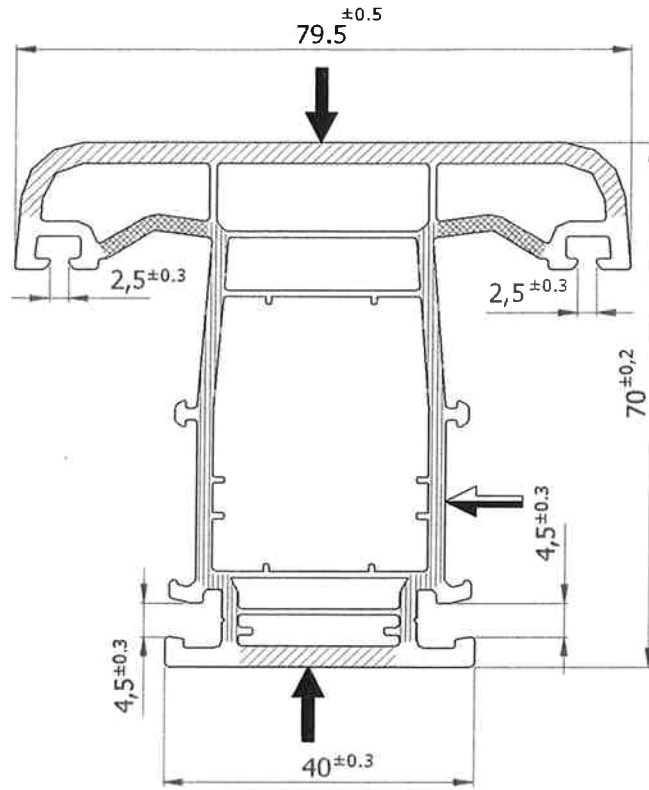
mean breaking stress in N/mm² Actual value: 56.5 Required value: ≥ 35 N/mm²
smallest single value in N/mm² Actual value: 50.8 Required value: ≥ 30 N/mm²

4.9 Weathering resistance

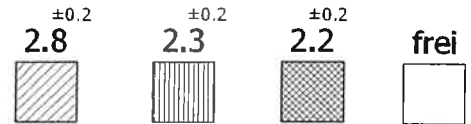
The requirement from EN 12608 in respect of weathering resistance (impact strength after artificial weathering and colour fastness) with classification S (severe climate) was met.

The test results have been documented in test report no. 50127/02, issued by SKZ - TeConA GmbH.

Profilhersteller : EGE PROFIL TICARET VE SANAYI A.S.
 System : ZENDOW
 Produktionsstaette : IZMIR
 EN 12608



Kugelfallstellen :
 Profilsiglerstellen :
 Metergewicht : (1.230 - 1.260 kg/m)
 Schweißseignung Fb ξ : 3840 N
 Widerstandsmoment W(mm³) : 9420 mm³
 Abstand der kritischen Faser e (mm) : 40.00 mm
 Länge des Innenschenkels Li (mm) : 202.8 mm



 A.O.S.B. 10000 Sok. No:508 / İzmir Tel : + 90 232 336 71 01 Fax : + 90 232 336 71 03			A	1/1	D		G		Product Name : ZENDOW ORTAKAYIT ZENDOW TRANSOM			
	B			E		H						
	C			F		I						
ENGINEERING DEPARTMENT			Signature		Date							
Drawer	Yücel ÖZBEY			06.10.05		Pr.No	12620	Mat.	PVC			
Control	Didem KALE			06.10.05		A (mm2)	907.0707	Per.(mm)	907.0857			
Control	Osman DEMIREL			06.10.05		Rev.	0	Ix (cm4)	57.0754			
Approval	Ethem GÖKMEN			06.10.05		Draw.No	EP-0198	Iy (cm4)	37.6828			