

**Test report no.:** 64918/04

**Customer:** EGE-Profil A.S.  
Atatürk Organize Sanayi Bölgesi  
10003 Sokak Nr.: 5  
35510 Cigli-Izmir  
TURKEY

**Order:** Testing material characteristics according to EN 12608  
item 5.1.3 on window profiles made of PVC-U.

**E-mail dated:** 2004-05-06 **from:** Ms Sebnem Vergote

**Test samples received on:** 2004-04-22

**Test period:** 2004-05-07 to 2004-06-01

This test report consists of 4 pages.


Würzburg, 2004-06-24  
Mü/ste

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## 1. Order

The company EGE-Profil 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 May 6, 2004: Testing material characteristics according to EN 12608, item 5.1.3, on window profiles made of PVC-U.

## 2. Test material

SKZ - TeConA GmbH had the following test material at their disposal on April 22, 2004:

3 x 1 m window profile sections, made of PVC-U, colour white  
3 kg PVC-U Dry Blend (powder blend) colour white

Profile manufacturer:	EGE.-Profil A.S.
Production plant:	35510 Cigli-Izmir
Designation of profile	Everest Kasa L / Everest Frame L
Profile identification:	Everest Kala L / Everest Frame L
Designation of formulation:	9610101
Basis of stabilisation:	lead

## 3. Execution of test

The material characteristics test according to EN 12608, "Unplasticised polyvinylchloride (PVC-U) profiles for the fabrication of windows and doors, classification, requirements and test methods" were carried out in line with the specifications provided in annex A.

Unless indicated otherwise, pre-testing storage and the test itself were carried out at standard conditioning atmosphere 23/50-2 according to DIN EN ISO 291. In general, the profile sections were stored at  $(23 \pm 5)$  °C before testing.

Usually our reports are based on accredited standards. The list of all accredited standards is shown on the homepage at [www.skz.de](http://www.skz.de).

### 3.1 Determination of the Vicat-softening temperature

The Vicat softening temperature VST was determined according to DIN EN ISO 306, method B/50 on the window profile sections. The samples were taken from the window profile, the tip of the indenter was placed onto the outer sight surface.  
The mean value is based on 3 individual values.

Requirement:

The Vicat softening temperature VST shall not be less than 75 °C.

### 3.2 Charpy impact strength

The Charpy-impact strength  $a_{cN}$  was tested on simple-notched samples sized (80 x 10 x 4) mm according to DIN EN ISO 179-2 / 1eA. The notch radius was 0.25 mm. The samples were taken from pressed plates by milling. The mean value is based on 10 individual values.

Requirement:

Charpy impact strength  $a_{cN}$  shall not be less than the nominal value specified by the manufacturer with 20 kJ/m<sup>2</sup>.

Production of calendered sheet and pressed plates:

The production of calendered sheet and pressed plates was carried out according to ISO 1163-2.

Production of calendered sheet:

Temperature of roll:	175 °C
Duration:	5 min

Production of pressed plates:

Pressing temperature:	180 °C
Pressing time:	10 min
Thickness of pressed plates:	4 mm

### 3.3 Flexural modulus of elasticity

The flexural modulus of elasticity ( $E_b$ ) was determined according to EN ISO 178. The samples were taken from pressed plates by milling. (For parameters for calendered sheet and pressed plate production, please see item 3.2)

Requirement:

The flexural modulus of elasticity ( $E_b$ ) at 23°C shall not be less than 2,200 N/mm<sup>2</sup>.



### 3.4 Tensile impact strength

The tensile impact strength test was carried out according to EN ISO 8256, on samples of type 5. The samples were taken from the outer sight surface of the window profiles, in the direction of extrusion, by milling.

The mean value is based on 10 individual values.

Requirement:

The mean tensile impact strength shall not be less than 600 kJ/m<sup>2</sup>.

## 4. Test results

	Characteristics/test method	Unit	Requirement:	Result
4.1	Vicat-softening temperature EN ISO 306, B/50	°C	≥ 75	82
4.2	Charpy-impact strength $a_{cN}$ EN ISO 179 / 1eA	kJ/m <sup>2</sup>	≥ 20.0	111.3 P <sup>*)</sup>
4.3	Flexural modulus of elasticity EN ISO 178	N/mm <sup>2</sup>	≥ 2,200	2762
4.4	Tensile impact strength EN ISO 8256	kJ/m <sup>2</sup>	≥ 600	964.4

\*) P = partial fracture

## 5. Summary

The tested material for extrusion of window profiles has met the requirements according to EN 12608, annex A.

With respect of the classification of Charpy impact strength, the requirement of at least 20 kJ/ m<sup>2</sup> was met.