

Test Report

No. 509 33381e



Date of Report 25 April 2007

Client **Weiss Chemie + Technik
GmbH & Co. KG**
Hansastr. 2

35703 Haiger

Order Determination of the tensile strength of frame joints with
glued corner connections using aluminium profiles

Object Frame joints with glued corner connections with adhesive
COSMOPUR 819

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1 Definition of task

Weiss Chemie + Technik GmbH & Co. KG , D-35703 Haiger, instructed **ift** Rosenheim to examine the tensile strength of frame joints with glued corner connections using the aluminium profile WICLINE 60E.

2 Object

Sampling	Making of the specimen by the client
Delivery of test specimen	23 February 2007
Registration number	21468
Test period	01 March 2007
Test specimen	see figures 1 to 3
Adhesive	COSMOPUR 819 (Charge 3606004)
Dimensions	Length of the blade: 300 mm
Aluminium profiles	AlMgSi 0.5
Surface	chromatic
Thermal break	PA-bars

The client gave the following information regarding the production of the specimen:

COSMOPUR 819, 1-K-PUR-adhesive was injected into the system hollow section of the frame corners directly from the cartridge with the fitting cartridge point ((23±2)g/angle).

Before assembling humidity, necessary for reaction of 1-K-PUR-adhesives was injected into the profile chambers.

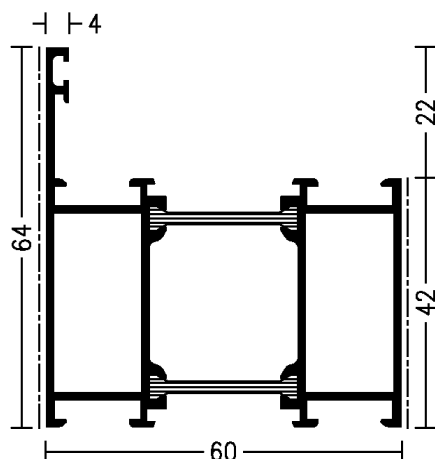


Figure 1 Profile cross section

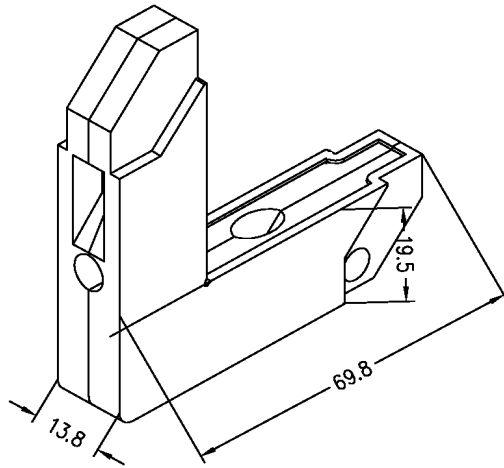


Figure 2 Applied corner connector (broad) made from aluminium – diecast

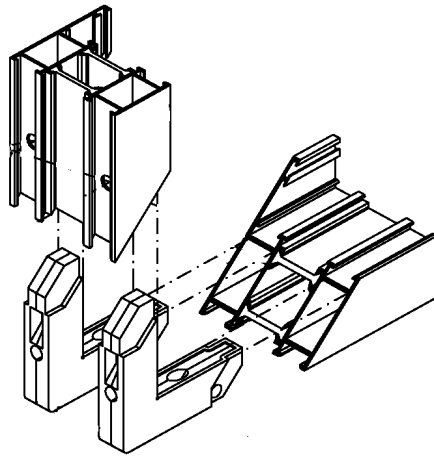


Figure 3 Exploded drawing for the composition of profile and corner connector

3 Procedure

The tensile strength was determined in test equipment according to DIN EN ISO 7500-1 with a constant forward movement speed of 2 mm/min according to the arrangement as shown in figure 4.

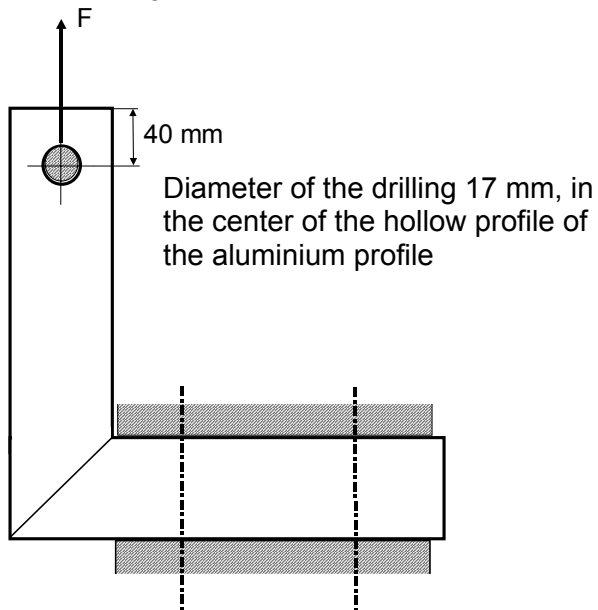


Figure 4 Schematic view of the test arrangement

The following describes the test procedure agreed upon:

Determination of the tensile strength on five connected frame corners at a temperature of $+80^{\circ}\text{C}$; the frame corners were stored before testing for more than 15 hours in a ventilated oven at a temperature of $(+80 \pm 3)^{\circ}\text{C}$.

4 Results

The results of the accomplished test series are given in table 1.


Table 1 tensile strength at a temperature of +80°C

Frame Corner	Tensile strength in N
01	16.233
02	15.031
03	11.339
04	17.675
05	16.888
Average	15.433
Standard deviation	2.485

5 Conditions and Guidance for the Use of ift Test Documents

The enclosed **ift**-Guidance Sheet "Conditions and Guidance for the Use of **ift** Test Documents" for advertising purposes and for publication of their content' lays down the rules on the use of the test reports.

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