

# Test Report

Nr. 509 19381/1 Rev 2 e\*)



**Report date** 19. May 2003

**Client** OTTO - CHEMIE  
Hermann Otto GmbH  
Krankenhausstraße 14  
83413 Fridolfing

**Order description** Determination of the tensile strength of glued corner connections of aluminium profiles after 24 hours and 7 days of curing time of the adhesive.

**Object** Profile: 131426; system WICSTYLE 50EN  
Corner conn.: 193282; system WICSTYLE 50EN  
Adhesive: OTTOCOLL® P 86 identical with Novapur® P 86; Otto-Chemie

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\*) The test report No. 509 19381/1M dated 18 May 2000 has been corrected according to the new system designation. The number of the valid test report is 509 19381/1 Rev 2.  
The revision only concerns the change of system designation of the adhesive tested.  
This test report is a translation of test report no. 509 19381/1 Rev 2.

## 1 Definition of task

Hermann Otto GmbH, 83413 Fridolfing, instructed **ift** Rosenheim to examine the tensile strength of frame joints with glued corner connections using aluminium profiles. The tensile strength was determined after 24 hours and 7 days of curing time.

## 2 Object

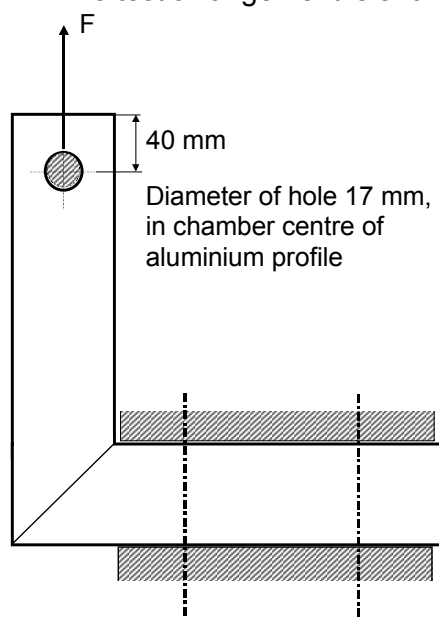
The Client provided **ift** with glued, mitre-jointed frame corners with the following data

Aluminium profile:	No. 131426, system WICSTYLE 50EN
Aluminium corner conn.:	No. 193282, system WICSTYLE 50EN
Adhesive	1-component PU-adhesive OTTOCOLL <sup>®</sup> P 86 identical with Novapur <sup>®</sup> P 86; Otto-Chemie

The frame corners were glued in accordance with the instructions for use provided by the adhesive manufacturer.

## 3 Implementation

Before testing the tensile strength, the screws to fix the corner angle were removed so that only the gluing was effective, without any mechanical fixings. The tensile strength was tested in standard climate according to DIN 50014-23/50-2 with a constant forward movement speed of 2 mm/min. The test arrangement is shown in figure 1.



**Figure 1** Arrangement to test the tensile strength

## 4 Results

Table 1 summarises the values of tensile strength determined after 24 hours of curing time in standard climate 23/50-2.

**Table 1** Tensile strength after 24 h of curing time

Test specimen no.	Maximum tensile strength in N
1	5896
2	5567
3	5725
4	6450
5	5627
6	6603
7	5649
Mean value	5931
Standard deviation	422
Variation coefficient in %	7.1

Table 2 summarises the values of tensile strength determined after 7 days of curing time in standard climate 23/50-2.

**Table 2** Tensile strength after 7 days of curing time

Test specimen no.	Maximum tensile strength in N
1	15361
2	14579
3	15902
4	12421
5	12706
6	16093
7	13913
Mean value	14425
Standard deviation	1477
Variation coefficient in %	10.2

## 5 Validity of test results

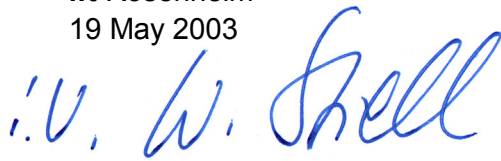
The values stated in this Test Report are exclusively related to the described and tested objects described in item 2.

## 6 Notes on the use of ift test reports

The enclosed **ift** notice "Conditions and notes 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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ift Rosenheim  
19 May 2003

A handwritten signature in blue ink, appearing to read 'Dr. H. Hohenstein'.

Dr. Helmut Hohenstein  
Director

A handwritten signature in blue ink, appearing to read 'Karin Lieb'.

i. A. Karin Lieb  
Head of Material Testing Department