

# Evidence of Performance

## Classification of thermoplastic wood adhesives for non-structural applications

Test Report  
No. 16-003564-PR01  
(PB-K15-09-en-01)



Client AKKIM YAPI KIMYASALLARI  
SANAYI VE TICARET A.S.  
Yesilbayir Mahallesi Simsir  
Sokak No: 22  
34555 Hadimköy - ISTANBUL  
Turkey

Product	Wood adhesive
Designation	Express Montage Adhesive/ Adhesive/ 610
Hardener	-/-
Portion of hardener	-/-
Special features	-/-

### Basis

EN 205 : 1991-05  
Test methods for wood adhesives for non-structural applications; determination of tensile shear strength of lap joints

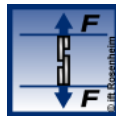
EN 204 : 2001-05  
Classification of thermoplastic wood adhesives for non-structural applications.

Corresponds to the national standard DIN EN.

### Instructions for use

The present test report serves to demonstrate the classification to load group D4

### Classification according to EN 204



## Load group D4

Load group	Storage sequence	Min. value acc. to EN 204 in N/mm <sup>2</sup>	Mean value of the adhesive strength in N/mm <sup>2</sup>
D4	1	≥ 10	11.8
D4	3	≥ 4	6.8
D4	5	≥ 4	6.0

### Validity

The data and results given relate solely to the tested and described specimen.

Testing of adhesive strength does not allow any statement to be made on further characteristics of the tested adhesive regarding performance and quality.

### Notes on publication

The ift-Guidance Sheet "Conditions and Guidance for the Use of ift Test Documents" applies.

The cover sheet can be used as abstract.

ift Rosenheim  
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Dr. Ing. Odette Moarcas  
Project Coordinator  
Operations / Technology

Stefan Hehn, Dipl.-Ing. (FH)  
Operating Testing Officer  
Material Testing

### Contents

The report contains a total of 4 page/s

- 1 Object
- 2 Procedure
- 3 Detailed results

## 1 Object

### 1.1 Description of the test specimen

Building material	Wood adhesive
Manufacturer	AKKIM YAPI KIMYASALLARI SANAYI VE TICARET A.S.
Date of production	November 1st, 2016
Product designation	Express Montage Adhesive/ Adhesive/ 610
Number of components	1
Hardener	-/-
Portion of hardener	-/-

To evaluate the performance of the adhesive, test specimen were made to DIN EN 205 with a thin adhesive joint.

Type of wood	Beech, non-damped
Apparent density kg/m <sup>3</sup>	700 ± 100
Moisture content in %	12 ± 1
Thickness of the joined parts in mm	5
Amount of adhesive in g/m <sup>2</sup> /type	approx. 150, applied on one side
Open assembly time in min	approx. 2
Closed assembly time in min	approx. 1
Duration of pressure in min at (20 ± 2) °C	approx. 15
Magnitude of pressure in N/mm <sup>2</sup>	approx. 1.0

The description is based on inspecting of the test specimen at **ift**. Article designations/numbers as well as details of the material and gluing conditions were given by the client. (Additional data provided by the client are marked with \*).

## 2 Procedure

### 2.1 Sampling

The adhesive was chosen by the client

Delivery	November 9th, 2016
Registration number	42472

To evaluate the performance of the adhesive, test specimens were produced at **ift** according to DIN EN 205 : 1991-10 with a thin adhesive joint.

Number of test specimen per storage sequence 20 samples

## 2.2 Process

### Technical basics

EN 205 : 1991-05 Test methods for wood adhesives for non-structural applications; determination of tensile strength of lap joints

EN 204 : 2001-05 Classification of thermoplastic wood adhesives for non-structural application.

### Corresponds to the national standards:

DIN EN 205 : 1991-10 Test methods for wood adhesives for non-structural applications; determination of tensile strength of lap joints

DIN EN 204 : 2001-09 Classification of thermoplastic wood adhesives for non-structural application

Boundary conditions Correspond to the demands of the standard

Load speed 50 mm/min

Deviation There were the following deviations from the test procedure or test conditions:

Evaluation of 20 samples instead of 10 samples for each of the storage sequences.

## 2.3 Test equipment

Press: Equipment number: 21447  
Material testing machine corresponds to DIN EN ISO 7500-1 : 1999-11  
Equipment number: 22561  
Hot water container Equipment number: 22447  
Normal climate room: Equipment number: 22040  
Measuring device for cut width: Equipment number: 22900

## 2.4 Testing

Test period November 23th, 2016 - December 5th, 2016

Testing personnel Stefan Hehn, Andreas Seebauer

### 3 Detailed results

**Table 1** Measured values and statistical evaluation to determine the load group D4 for the adhesive Express Montage Adhesive/ Adhesive/ 610

	Test no.	D4 – 1	D4 – 3	D4 – 5
	Measuring data	N/mm <sup>2</sup>	N/mm <sup>2</sup>	N/mm <sup>2</sup>
	1	9.68	5.70	5.56
	2	8.91	6.68	5.36
	3	11.53	6.43	7.05
	4	11.40	6.67	6.99
	5	14.00	6.57	6.77
	6	10.71	4.96	5.85
	7	9.51	5.89	6.51
	8	11.79	6.24	6.76
	9	13.18	6.68	6.40
	10	12.81	7.08	6.68
	11	-	6.60	5.50
	12	-	7.21	5.24
	13	-	7.41	5.63
	14	-	7.24	6.02
	15	11.05	7.26	5.31
	16	13.08	6.01	5.21
	17	13.30	7.39	4.77
	18	12.14	7.93	5.38
	19	14.61	7.56	6.77
	20	11.13	7.45	6.22
Number		20	20	20
Mean value		11.80 N/mm <sup>2</sup>	6.75 N/mm <sup>2</sup>	6.00 N/mm <sup>2</sup>
Standard deviation		1.64 N/mm <sup>2</sup>	0.73 N/mm <sup>2</sup>	0.70 N/mm <sup>2</sup>
Variation coefficient		14 %	11 %	12 %
Maximum		14.61 N/mm <sup>2</sup>	7.93 N/mm <sup>2</sup>	7.05 N/mm <sup>2</sup>
Minimum		8.91 N/mm <sup>2</sup>	4.96 N/mm <sup>2</sup>	4.77 N/mm <sup>2</sup>
Estimated wood rupture		100 %	0 %	0 %