

**Classification report**  
Classification of thermoplastic wood adhesives for non-structural applications

Test report 505 28108



Client **LEEKO International Co.,Ltd**  
25#, Alley 4680,  
Beisonggong rd  
Dongdun Songjiang district

SHANGHAI CHINA

Product **Wood adhesive**

Product name **L.K1090**

Hardener **L.K1090**

Portion of hardener **10 % - 15 %**

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 standards of DIN EN.

Instructions for use  
This test report serves to prove classification to load group D4

Validity  
The data and results stated refer exclusively to the test specimen tested and described. Testing of adhesive strength does not render possible any statement on other properties of the tested adhesive determining performance and quality.

Notes on publication  
The IFT notice "Conditions and notes for the use of IFT test documents" applies.  
The cover sheet can be used as a summary.

Contents  
The report comprises a total of 4 pages  
1 Object  
2 Procedure  
3 Detailed results

Classification according to EN 204



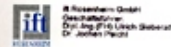
Load group D4

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	15,6
D4	3	≥ 4	8,6
D4	5	≥ 4	8,0

ift Rosenheim  
31 March 2004

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Client LEEKO International Co. Ltd, SHANGHAI



**1 Object**

**1.1 Description of the test specimen**

Building material **Wood adhesive**  
Manufacturer **LEEKO International Co.,Ltd**  
Date of production **February 2004**  
Product designation **L.K1090**  
Number of components **2**  
Hardener **L.K1090**  
Portion of hardener **(10 % -15 %) approx. 13 %**

To evaluate the performance of the adhesive, test specimens 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 both sides**  
Open assembly time in min **approx. 3**  
Closed assembly time in min **approx. 3**  
Duration of pressure in h at (20 ± 2) °C **approx. 2**  
Magnitude of pressure in N/mm<sup>2</sup> **approx. 0,7**

The description is based on inspecting the test specimen at IFT. Article designations / numbers as well as details of the material and gluing conditions were given by the client.

**2 Procedure**

**2.1 Sampling**

The adhesive was chosen by the client  
Delivery **3 March 2004**  
Registration number **16549**

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 specimens per storage sequence **20 samples**

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**2.2 Process**

Technical basis  
EN 205 : 1991-05

EN 204 : 2001-05

Corresponds to the national standards:

DIN EN 205 : 1991-10

DIN EN 204 : 2001-09

Boundary conditions

Load speed

Deviation

Test methods for wood adhesives for non-structural applications; determination of tensile strength of lap joints  
Classification of thermoplastic wood adhesives for non-structural application.

Test methods for wood adhesives for non-structural applications; determination of tensile strength of lap joints  
Classification of thermoplastic wood adhesives for non-structural application

Correspond to the demands of the standard

50 mm/min

There were no deviations from the test procedure or test conditions

**2.3 Test equipment**

Press:

Material testing machine

Hot water container

Normal climate room:

Measuring device for

Cut width:

Equipment number: 21447

corresponds to DIN EN ISO 7500-1 : 1999-11

Equipment number: 22581

Equipment number: 22447

Equipment number: 22040

Equipment number: 22900

**2.4 Testing**

Test period

Testing member of staff

March 2004

Thomas Eder

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**3 Detailed results**

**Table 1** Measured values and statistical evaluation to determine the load group D4 for the adhesive L.K1090 with 13 % hardener L.K1090

	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	14,61	7,68	8,48
	2	15,73	8,42	8,27
	3	13,07	8,70	7,80
	4	13,17	9,64	7,42
	5	12,44	9,38	7,23
	6	13,48	8,95	7,11
	7	13,25	8,89	7,16
	8	13,43	9,05	6,66
	9	13,74	10,00	6,68
	10	12,45	9,19	6,44
	11	15,09	7,73	8,99
	12	16,04	7,49	8,86
	13	17,01	8,14	9,07
	14	17,51	8,88	8,79
	15	16,51	8,71	8,50
	16	19,37	8,09	8,64
	17	18,04	8,64	8,92
	18	19,14	9,14	8,67
	19	19,37	9,28	8,43
	20	18,50	9,21	8,30
Number	20	20	20	
Mean value	15,60 N/mm <sup>2</sup>	8,77 N/mm <sup>2</sup>	8,02 N/mm <sup>2</sup>	
Standard deviation	2,45 N/mm <sup>2</sup>	0,67 N/mm <sup>2</sup>	0,87 N/mm <sup>2</sup>	
Variation coefficient	15,68 %	7,63 %	10,87 %	
Maximum	19,37 N/mm <sup>2</sup>	10,00 N/mm <sup>2</sup>	9,07 N/mm <sup>2</sup>	
Minimum	12,44 N/mm <sup>2</sup>	7,49 N/mm <sup>2</sup>	6,44 N/mm <sup>2</sup>	
Estimated wood rupture	100	0 - 100 %	0 - 30 %	

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