Classification Report

Classification of thermoplastic wood adhesives for non-structural applications

Test Report 505 31721/1e

Client **Soudal N. V.**
Everdongenlaan 18 - 20

2300 Turnhout
Belgium

Product	Wood adhesive
Product designation	PRO 40 P
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 standards of 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/mm²	Mean value of the adhesive strength in N/mm²
D4	1	≥ 10	12.1
D4	3	≥ 4	5.8
D4	5	≥ 4	5.6

Validity

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

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 may be used as abstract.

ift Rosenheim
30 May 2006

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The report comprises a toal of 4 pages

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1 Object

1.1 Description of the test specimen

Building material	Wood adhesive
Manufacturer	Soudal N. V., B-2300 Turnhout
Date of production	April 2006
Product designation	PRO 40 P
Number of components	1

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^3	700 ± 100
Moisture content in %	12 ± 1
Thickness of the joined parts in mm	5
Amount of adhesive in g/m^2/Art	approx.. 150, applied on one side
Open assembly time in min	approx. 4
Closed assembly time in min	approx. 4
Duration of pressure in h at (20 ± 2) °C	aprpox. 3
Magnitude of pressure in N/mm^2	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	20 April 2006
Registration number	19911/01

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 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	May 2006
Testing member of staff	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 PRO 40 P

	Test no.	D4 – 1	D4 – 3	D4 – 5
	Measuring data	**N/mm²**	**N/mm²**	**N/mm²**
	1	10.43	4.20	4.86
	2	13.99	5.11	6.32
	3	12.43	6.37	5.56
	4	11.34	4.43	7.27
	5	11.29	5.77	4.55
	6	10.41	4.34	6.33
	7	13.72	4.60	6.51
	8	13.35	6.38	7.19
	9	13.56	6.06	6.43
	10	12.54	5.75	4.67
	11	11.64	7.51	5.54
	12	11.22	7.13	7.15
	13	13.61	5.54	7.31
	14	15.09	6.30	5.27
	15	12.37	4.06	5.08
	16	10.77	7.59	4.18
	17	10.45	6.34	4.90
	18	10.27	6.52	4.01
	19	11.73	7.47	4.12
	20	11.58	4.48	4.36
Number		20	20	20
Mean value		12.09 N/mm²	5.80 N/mm²	5.58 N/mm²
Standard deviation		1.41 N/mm²	1.17 N/mm²	1.14 N/mm²
Variation coefficient		11.64 %	20.10 %	20.50 %
Maximum		15.09 N/mm²	7.59 N/mm²	7.31 N/mm²
Minimum		10.27 N/mm²	4.06 N/mm²	4.01 N/mm²
Estimated wood rupture		0-100 %	0 %	0 %

ift Rosenheim
30 May 2006

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