TALLINN TECHNICAL UNIVERSITY
TESTING CENTRE
FURNITURE TESTING LABORATORY
TTÜ 1918

TEST REPORT

No. 239 2007-07-05
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Product designation: Heat-treated (215 ºC) ashwood boards 20x135x1000 mm
Producer: OÜ Brenstol
Ground for testing: Order for testing 2007-05-22
Testing objective: Determination of physical and mechanical properties of boards

Test methods.

Moisture content was determined by drying samples of boards in drying oven at a temperature of 103-105 ºC until the constant mass was reached.
Density, bending strength and resistance to indentation were determined at the equilibrium moisture content of samples in laboratory conditions 4,6%.
For determination he equilibrium moisture content in outdoor conditions the samples were conditioned to constant mass in air at relative moisture content of 85%.
The resistance to indentation was determined according EN 1534 by applying a loaded indenter of 10 mm diameter to the face of the test specimen. The diameter of the residual indentation was used to calculate the resistance to indentation of the test specimen.

Test results.

Moisture content in laboratory conditions

Sample No.	1	2	3	4	5	6	**Average**
Moisture content, %	4,4	4,7	4,7	4,5	4,7	4,7	**4,6**

Density

Sample No.	1	2	3	4	5	6	**Average**
Density, kg/m^3	597	598	582	580	608	575	**590**

Equilibrium moisture content in outdoor conditions

Sample No.	1	2	3	4	5	6	**Average**
Moisture content, %	7,7	8,0	7,9	7,8	7,9	8,1	**7,9**

Bending strength

Sample No.	1	2	3	4	5	**Average**
Bending strength, N/mm^2	110,0	102,3	89.2	100,4	83,5	
Sample No.	6	7	8	9	10	
Bending strength, N/mm^2	82,1	112,0	94,4	99,0	93,1	**96,6**

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Resistance to indentation

No.	d1	d2	d	HB(N/mm^2)
1	7,3	7,6	7,45	19,1
2	7,2	7,4	7,30	20,1
3	6,9	7,1	7,00	22,3
4	7,2	7,4	7,30	20,1
5	7,0	6,6	6,80	23,9
6	7,1	6,9	7,00	22,3
7	6,8	7,0	6,90	23,1
8	6,6	6,7	6,65	25,2
9	5,6	5,6	5,60	37,1
10	6,1	5,9	6,00	31,8
11	6,0	5,9	5,95	32,5
12	5,7	6,0	5,85	33,7
13	5,9	5,9	5,90	33,1
14	6,0	6,3	6,15	30,1
15	6,3	6,2	6,25	29,0
16	6,1	6,2	6,15	30,1
17	4,9	5,1	5,00	47,5
18	5,4	5,4	5,40	40,2
19	5,8	5,8	5,80	34,4
20	6,0	5,9	5,95	32,5
Average value				**29,4**

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