

THE INTERNATIONAL RESEARCH GROUP ON WOOD PROTECTION

Section 2

Testing Methodology and Assessment

Scots pine sapwood

**Natural durable timber – Basidiomycete test results
IRG/WP Durability Database**

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Disclaimer

The responsibility for the data presented in this paper falls to the authors exclusively. The data presented are raw test data and intended to get used for scientific purposes only.

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AIMS AND SCOPE OF THE IRG-WP DURABILITY DATABASE

The overall aim of the IRG-WP durability data base is the allocation of wood durability test results for comparative studies and re-analyses. The data base shall serve as pool for service life prediction and modelling and shall contribute to an enhanced understanding of wood durability. It is an open web-based platform for scientific exchange in the field of wood durability and wood protection.

It is NOT the aim of the data base to promote or denigrate any product or material. The data base will contain raw data only; no statistical evaluation will be included. Thus it will be the exclusive responsibility of the user to interpret the test results published in the data base.

For each data set, the full range of information about the test method, the test material, and other relevant parameters, is required to guarantee reliability of the data. For this reason every data set submitted is reviewed and checked for completeness of all relevant data.

The database allows submission of assessment data from all kinds of standardized and non-standardized wood durability tests.

Records of the IRG/WP Durability data base shall be cited as in the following example:

Brischke C., Meyer L. (2013) Douglas fir. Natural durable timber - Field test results. IRG/WP Durability Database. Stockholm: The International Research Group on Wood Protection, IRG/WP/DDB 13-00001.

INFORMATION

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TESTED TIMBER

Trade name Scots pine sapwood
Botanical name *Pinus sylvestris* L.
Origin Germany
Number of replicates Depends on test fungus

TEST METHODS

Standard method	EN 113 (1996)
Alteration of standard	16 weeks exposure
Leaching/Ageing procedure	EN 84 (1997)
Specimen dimension and shape	50 x 25 x 15 mm ³

RESULTS

Assessment

Material	<i>Pinus sylvestris</i> L.					
Test fungus	<i>Coniophora puteana</i>			<i>Gloeophyllum trabeum</i>		
Measure	Relative mass loss	Final moisture content	Oven-dry density	Relative mass loss	Final moisture content	Oven-dry density
Replicate ID	[%]	[%]	[kg/m ³]	[%]	[%]	[kg/m ³]
1	37.6	65.6	473	25.3	101.5	517
2	40.9	69.8	423	35.4	88.8	465
3	30.6	56.3	598	25.4	87.2	425
4	30.6	61.8	492	30.0	81.6	413
5	35.9	68.3	420	29.8	98.9	468
6	36.5	64.5	420	18.8	158.6	444
7	35.7	62.6	430	31.6	89.8	473
8	35.6	57.8	426	17.2	108.3	547
9	34.7	57.2	472	20.6	124.2	441
10	38.5	64.9	433	29.3	84.4	566
11	30.8	56.9	459	26.3	71.3	467
12	40.5	63.9	477	28.5	103.3	438
13	33.5	56.3	455	27.7	66.2	409
14	20.7	49.2	412	26.2	81.5	451
15	25.4	53.3	478	30.8	62.5	397

Material	<i>Pinus sylvestris</i> L.					
Test fungus	<i>Postia placenta</i> (<i>Rhodonía placenta</i>)			<i>Donkioporia expansa</i>		
Measure	Relative mass loss	Final moisture content	Oven-dry density	Relative mass loss	Final moisture content	Oven-dry density
Replicate ID	[%]	[%]	[kg/m³]	[%]	[%]	[kg/m³]
1	26.4	72.6	503	27.5	112.7	414
2	22.9	81.7	414	22.6	95.9	521
3	24.9	78.3	425	25.2	79.5	424
4	24.4	75.1	420	26.1	111.2	477
5	22.3	83.1	486	21.6	60.7	457
6	24.2	92.1	411	22.0	97.3	487
7	28.0	92.1	441	23.3	66.8	447
8	14.4	92.9	543	27.6	132.9	412
9	33.5	75.1	464	26.1	69.7	419
10	17.4	79.8	590	27.8	89.1	413
11	19.5	75.0	598	29.1	90.2	463
12	18.7	95.6	419	23.9	80.1	481
13	26.7	63.1	549	16.0	39.3	438
14	20.4	74.0	548	25.8	43.8	430
15	18.9	84.1	425	26.3	94.6	443

Material	<i>Pinus sylvestris</i> L.					
Test fungus	<i>Trametes versicolor</i>					
Measure	Relative mass loss	Final moisture content	Oven-dry density			
Replicate ID	[%]	[%]	[kg/m³]			
1	9.6	37.9	424			
2	0.8	33.7	555			
3	6.2	34.2	428			
4	7.4	35.6	490			
5	7.4	35.9	494			
6	9.1	37.7	485			
7	6.7	34.6	482			
8	9.2	35.9	513			
9	8.2	36.3	613			
10	7.3	35.9	440			
11	6.0	33.2	555			
12	5.4	32.0	444			
13	6.4	33.5	543			
14	8.0	36.5	485			