

THE INTERNATIONAL RESEARCH GROUP ON WOOD PROTECTION

Section 2

Testing Methodology and Assessment

Douglas fir

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

Brischke, C.

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

Submission Date 28.01.2016

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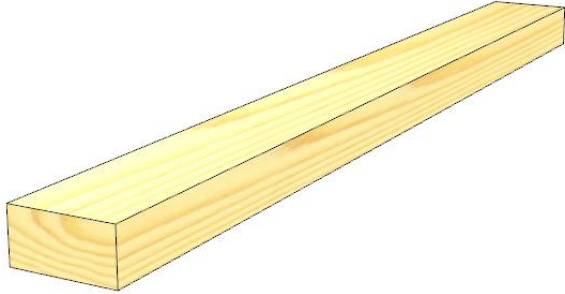
TESTED TIMBER

Trade name Douglas fir
Botanical name *Pseudotsuga menziesii* Franco.
Origin Germany
Number of replicates 9
Timber quality Pure heartwood

REFERENCE TIMBER

Trade name Scots pine sapwood
Botanical name *Pinus sylvestris* L.
Origin Germany
Number of replicates 11

TEST METHODS

Non-standard method	Horizontal double layer (Rapp and Augusta 2004)
Reference	Rapp A.O., Augusta U. (2004) The full guideline for the “double layer test method” – A field test method for determining the durability of wood out of ground. Stockholm: The International Research Group on Wood Protection, IRG/WP/04-20190.
Specimen dimension and shape	25 x 50 x 500 mm ³
Sketch of specimen (optional)	
Rating scheme	0 (sound), 1 (slight decay), 2 (moderate decay), 3 (severe decay), 4 (failure) after EN 252 (1989). Half ratings were permitted.
Address of test site	Vallvägen 9C/Ulls väg 27, P.O. Box 7008 SE-750 07 Uppsala, Sweden
Geographic coordinates (optional)	59°81'42,91''N, 17°65'95,86''E
Start of test	May 02 2001
Last evaluation	September 25 2008
Status of test	terminated

RESULTS

Assessment

Material	<i>Pseudotsuga menziesii</i> Franco.					
Date	26.10.2001	13.09.2002	15.10.2003	01.09.2004	28.09.2005	26.09.2006
Assessment	1	2	3	4	5	6
Replicate ID	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	1
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0

Material	<i>Pseudotsuga menziesii</i> Franco.					
Date	14.05.2007	25.09.2008				
Assessment	7	8	9	10	11	12
Replicate ID	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]
1	0	0				
2	0	0				
3	0	0				
4	1	1				
5	0	0				
6	0	1				
7	0	2				
8	0	1				
9	0	0				

Assessment Reference

Material	<i>Pinus sylvestris</i> L. sapwood					
Date	26.10.2001	13.09.2002	15.10.2003	01.09.2004	28.09.2005	26.09.2006
Assessment	1	2	3	4	5	6
Replicate ID	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]
1	0	0	0	0	0	0
2	0	0	0	0	1	1
3	0	0	0	0	1	1
4	0	0	0	1	2	2
5	0	0	0	1	2	2
6	0	0	0	0	0	2
7	0	0	0	0	0	2
8	0	0	0	0	0	2
9	0	0	0	0	0	2
10	0	0	0	0	1	1
11	0	0	0	0	1	2

Material	<i>Pinus sylvestris</i> L. sapwood					
Date	14.05.2007	25.09.2008				
Assessment	7	8	9	10	11	12
Replicate ID	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]
1	1	2				
2	1	2				
3	1	3				
4	2	4				
5	3	4				
6	2	4				
7	2	3				
8	2	2				
9	2	4				
10	1	4				
11	2	4				

REFERENCES

Brischke C, Rapp AO (2008) *Dose-response relationships between wood moisture content, wood temperature and fungal decay determined for 23 European field test sites.* Wood Science and Technology 42: 507-518