

THE INTERNATIONAL RESEARCH GROUP ON WOOD PROTECTION

Section 2

Testing Methodology and Assessment

Thermally modified Scots pine sapwood

**Thermally modified timber – Field 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

Submission Date 20.01.2016

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TESTED TIMBER

Trade name Scots pine sapwood

Botanical name *Pinus sylvestris* L.

Origin L-joints were purchased from Building Research Establishment BRE, Garston, UK and reported to be of Scandinavian origin.

Treatment process Thermal modification according to Thermowood D specification by Scandinavian Heatwood AB

Number of replicates	14
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REFERENCE TIMBER

Trade name	Scots pine sapwood
Botanical name	<i>Pinus sylvestris</i> L.
Origin	L-joints were purchased from Building Research Establishment BRE, Garston, UK and reported to be of Scandinavian origin.
Number of replicates	20

TEST METHODS

Standard method	L-joint test
Reference	EN 330 (1993) Wood preservatives; field test method for determining the relative protective effectiveness of a wood preservative for use under a coating and exposed out of ground contact: L-joint method. European Committee for Standardization
Specimen dimension and shape	38 x 38 x 203 mm ³ , L-joints
Rating scheme	0 (sound), 1 (slight decay), 2 (moderate decay), 3 (severe decay), 4 (failure) after EN 330 (1993); half-step ratings were allowed. The evaluation interval has been approximately 12 months.
Address of test site	SP field test site, Borås, SE-501 15 Sweden
Geographic coordinates (optional)	57°71'48,95"N, 12°88'73,54"E
Start of test	December 02 2008
Last evaluation	2015
Status of test	still running

RESULTS

Assessment

Material	Thermally modified Scots pine					
Date	2009	2010	2011	2012	2013	2014
Assessment	1	2	3	4	5	6
Replicate ID	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]
1	0	0.5	0.5	1	1	1
2	0	0.5	1.5	1	2	2
3	0	0.5	1	1	1	1
4	0	0.5	0.5	0.5	2	1
5	0	0.5	0.5	0.5	1	1
6	0	0.5	0.5	0.5	2	1
7	0	0.5	0.5	0.5	1	1
8	0	0.5	0.5	0.5	2	1
9	0	0.5	0.5	0.5	1	1
10	0	0.5	1	1	1	1
11	0	0.5	0.5	0.5	2	1
12	0	0.5	0.5	0.5	1	1
13	0	0.5	0.5	0.5	2	1
14	0	0.5	0.5	0.5	2	1

Material	Thermally modified Scots pine					
Date	2015					
Assessment	1	2	3	4	5	6
Replicate ID	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]
1	1					
2	1					
3	1					
4	1					
5	1					
6	2					
7	1					
8	1					
9	1					
10	1					
11	2					
12	1					
13	1					
14	1					

Assessment – Reference

Material	<i>Pinus sylvestris</i> L.					
Date	2009	2010	2011	2012	2013	2014
Assessment	1	2	3	4	5	6
Replicate ID	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]
1	0.5	2	2	2	3	3
2	0.5	2	2.5	2	3	3
3	1	2	2	2	2	3
4	0.5	2	2	2	3	3
5	0.5	1	2	2	3	3
6	1	2	2.5	2.5	3	3
7	1	2	2.5	2.5	3	3
8	0.5	2	2	2	3	3
9	0.5	2	2	2	2	3
10	0.5	2	2.5	3	3	3
11	1	2	2	2.5	3	3
12	0.5	2	2.5	2.5	3	3
13	1	2	2.5	2.5	3	3
14	0.5	1	2.5	2.5	2.5	3
15	1	2	2	2.5	3	3
16	0.5	2	2	2	3	3
17	1	3	3	3	3	3
18	1	3	3	3	3	3
19	0.5	2	3	3	3	3
20	1	2	2	2.5	2.5	3

Material	<i>Pinus sylvestris</i> L.					
Date	2015					
Assessment	1	2	3	4	5	6
Replicate ID	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]	[0-4]
1	3					
2	3					
3	3					
4	3					
5	3					
6	3					
7	3					
8	3					
9	3					
10	3					
11	3					
12	3					
13	3					
14	3					
15	3					
16	3					
17	3					
18	3					
19	3					
20	3					