

A platform for exchange of  
performance data

# The IRG-WP Durability Database

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*COST FP 1303 Conference  
Kranjska Gora [Slovenia]  
23-24 October 2014*

- Allocation of wood durability test results for comparative studies and re-analysis
- Improve usability of existing data
- Pool for service life prediction and modelling
- Enhance the understanding of wood durability
- Create an added value for durability research and service life prediction

- NO AIM AT ALL: Promotion or denigration of any product or material
- Raw data only, no statistical evaluation
- Exclusive responsibility of the user to interpret test results
- Information about test method, test material, and other relevant parameters is required
- Each data set submitted will be reviewed and checked for completeness

- Web based electronic submission system
  - Information → Submission forms
  - Test data → Excel templates

## IRG Durability Database

### SCOPE

**The overall aim of the IRG-WP durability database is the allocation of wood durability test results for comparative studies and re-analyses.**

The database 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 database to promote or denigrate any product or material. The database 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 database.

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.

### ADD YOUR DATA

STEP 1


STEP 2

STEP 3

### DOWNLOAD TEMPLATE FILE

To help with submissions, we have provided two template files to record the results from decay, insect, termite, marine and combined tests. They are Excel files, and you will be asked to submit them with your test data. **Please download the appropriate Excel file below.** One is for FIELD tests and one for LAB tests — no further differentiation between

### SEARCH DOCUMENTS

  
Google™ Custom Search 

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- Natural durable timber NDT - Field tests
- Preservative treated timber PTT - Field tests
- Thermally modified timber TMT - Field tests
- Chemically modified timber CMT - Field tests
- Water repellent treated timber WRT - Field tests
- Composites - Field tests
  
- Natural durable timber NDT - Lab tests
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- Composites - **Lab tests**





## Authors

Corresponding author

Surname

Family name

Email

Affiliation and address

Institution

Street/PO Box

City

State

Zip Code

Country

Author 2

## Tested timber

Trade name

e.g. English oak

Botanical name

e.g. Quercus robur

Origin

e.g. South-West Poland

Number of replicates



Sampling (optional)

e.g. replicates taken from five different stems

Timber quality  
(optional)

e.g. extremely narrow tree rings

- Preservative name, Product name
- Active ingredients / concentration
- Impregnation / Treatment process
- Process parameters
- Dimension and shape of impregnation samples
- Sealing
- Heat treatment process
- Max. treatment temperature, treatment duration
- Impregnation chemical / water repellent
- Composite type
- Product specification

## Reference timber

Trade name

e.g. Scots pine sapwood

Botanical name

e.g. *Pinus sylvestris*

Origin

e.g. Central Poland

Number of replicates

Sampling (optional)

e.g. replicates taken from five different stems

Timber quality  
(optional)

e.g. heartwood portions less than five percent allowed

# Test method

Standard method

Select standard method or choose 'other' and give explanation/reference below

Alteration of standard  
(optional)

e.g. no end-grain sealing of Lap-Joint specimens

Non-standard method

e.g. Bundle test (Meyer 2020)

Reference

e.g. Meyer L. (2020) The Bundle test. International Research Group on Wood Protection, Document No.IRG/WP 20-20393

Specimen dimension  
and shape

Please give precise description of specimen dimension and shape. Dimensions in mm.

Sketch of specimen  
(optional)

Durchsuchen...

Rating scheme

e.g. 0 (sound), 1 (slight decay), 2 (moderate decay), 3 (severe decay), 4 (failure) after EN252 (1990)

Address

Name of test site

Geographic coordinates (optional) e.g. 52° 23' 33,24"N 9° 41' 38,85"O

City/Locality

State

Zip Code

Please Select



Country

Start of test



Month



Day



Year

Last evaluation



Month



Day



Year

Status of test

- still running
- terminated

# Durability Database

Natural durable timber - Lab test



## Test method

Leaching/Ageing procedure

e.g. EN 84, 6 months natural weathering

Sterilisation

- Autoclave treatment
- Gamma treatment
- none
- other (specify below)

Alteration of

# Durability Database

Manual

## Field tests



### SCOPE:

Please use this Excel template to fill in your field test data.

You can use this form for:

- In-ground field tests
- Above-ground field tests
- Marine tests
- Termite field tests
- Combined tests

Furthermore, you can use this form for:

- Natural durable timber NDT
- Thermally modified timber TMT
- Chemically modified timber CMT
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- Composites

### CONTENT:

This template file consists of three Example sheets, and five Template sheets.



# Durability Database

Degradation assessment

## Field test results



**Material** *Tsuga heterophylla*

**Date** 02.05.2012 03.05.2013 04.05.2014 10.05.2015 02.05.2016 08.05.2017

**Assessment 1** **Assessment 2** **Assessment 3** **Assessment 4** **Assessment 5** **Assessment 6**

**Replicate ID**

[0-4] [0-4] [0-4] [0-4] [0-4] [0-4]

1	0	0	1	1	1	2
2	0	1	2	2	3	4
3	0	0	1	2	3	3
4	0	1	1	1	2	2
5	0	0	0	2	2	3
6	0	0	1	1	2	2
7	0	0	1	1	2	3
8	0	0	1	2	3	4
9	0	1	2	3	4	4
10	0	0	1	3	4	4
11	0	0	0	2	4	4
12	0	0	0	1	2	3
13	0	1	1	1	3	3
14	0	1	1	1	2	3

# Durability Database

## Decay/Degradation types

### Field test results



Indicate the prevailing decay/degradation types. Please use the following abbreviations.

B = Brown rot, W = White rot, S = Soft rot, I = Insects / Beetles, T = Termites, SW = *Teredo*, L = *Limnoria*

Material *Tsuga heterophylla*

Date 02.05.2012 03.05.2013 04.05.2014 10.05.2015 02.05.2016 08.05.2017

Assessment 1 Assessment 2 Assessment 3 Assessment 4 Assessment 5 Assessment 6

Replicate ID

1			W		W	W, S	W
2		W	W	W	W	W, S	W, S
3			W	W	W	W	W
4		W	W	W	W	W, S	W, S
5					B	B	B
6			B	B	B	B	B
7			B	B	B	B, I	B, I
8			B	B	B	B	B, I
9		B	B	B	B	B	B
10			B	B	B	B	B
11					B	B	B
12					B	B	B

C W C W C W C W C W

# Durability Database

Additional data

## Retention/WPG/Intensity



**Material** *Thermally modified and wax impregnated Norway spruce*

Measure	dm	L*	a*	b*	Retention	Please select
Unit	[%]	[-]	[-]	[-]	[kg/m <sup>3</sup> ]	Please select

### Replicate ID

1	10,9	55	15	8	120
2	11,2	54	14	9	124
3	12,0	53	14	4	132
4	11,5	51	15	8	149
5	10,9	58	18	6	114
6	9,9	49	23	7	118
7	10,8	42	24	8	119
8	10,0	58	15	9	125
9	10,1	53	16	5	128
10	10,0	52	17	9	129

Manual

Assessment Example

Additional data Example

Assessment Tested timber

Assessment Reference

Additional data

# Results

Upload data file

Durchsuchen...

Use excel template 'Lab\_test\_data.xls'

Please fill in all relevant data (e.g. mass loss, survival rate, weight percent gains, etc.) in the excel file provided on the website.

# References

References

Please list Articles, reports and other papers related to this record

Please cite as follows:

Flæte PO, Alfredsen G, Evans FG (2011) Natural durability of wood tested in different environments in Northern Europe. International Research Group on Wood Protection. Document No. IRG/WP 11-10747

Brischke C (2010) Service life prediction of outdoor wooden decking and flooring. In: Littmann, K. (Ed.): Proceedings of the 7th International Colloquium "Industrial Floors", Stuttgart/Ostfildern, 14-16 December 2010: 431-440

Submit

 Print Form

- Web based electronic submission system
  - Information → Submission forms
  - Test data → Excel templates
- Submissions will be transferred to .pdf-document
  - Description of test material and methods
  - Test results
  - Additional information

**IRG/WP/DDB 14-00048**

**THE INTERNATIONAL RESEARCH GROUP ON WOOD PROTECTION**

**Section 2**

**Testing Methodology and Assessment**

**European aspen**

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

Alfredsen, G.; Flæte, P.O.

## → 107 datasets submitted

### SCOPE

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[European-beech-NDT-Graveyard-Brischke-Meyer-IRG-WP-DDB-13-00003](#)

[English-oak-NDT-Graveyard-Brischke-Meyer-IRG-WP-DDB-13-00004](#)

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[European-beech-NDT-Graveyard-Brischke-Meyer-IRG-WP-DDB-13-00011](#)

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[Copper-Sulphate-Ethanolamine-Norway-spruce-PTT-Doublelayer-Humar-IRG-WP-DDB-14-00004](#)

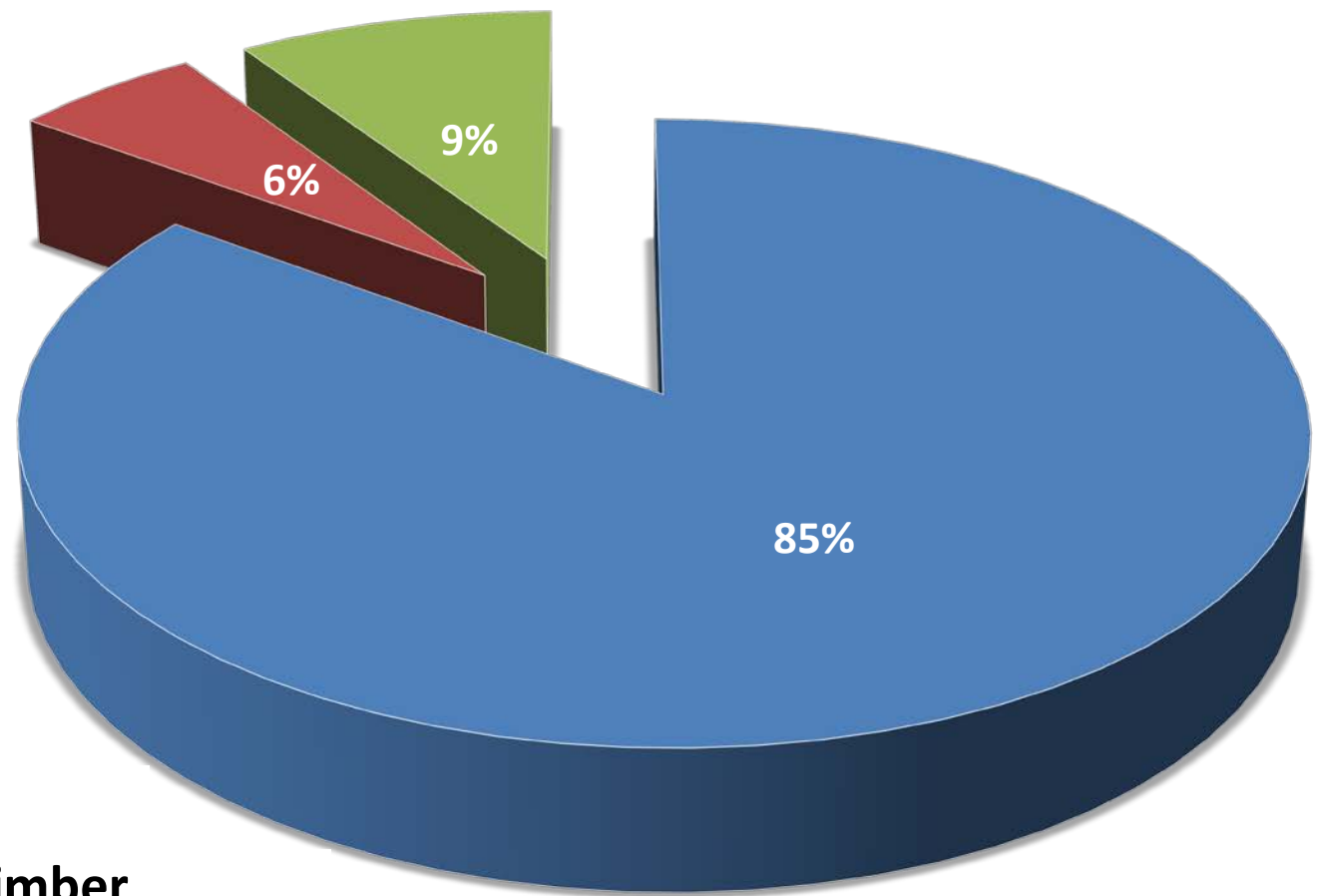
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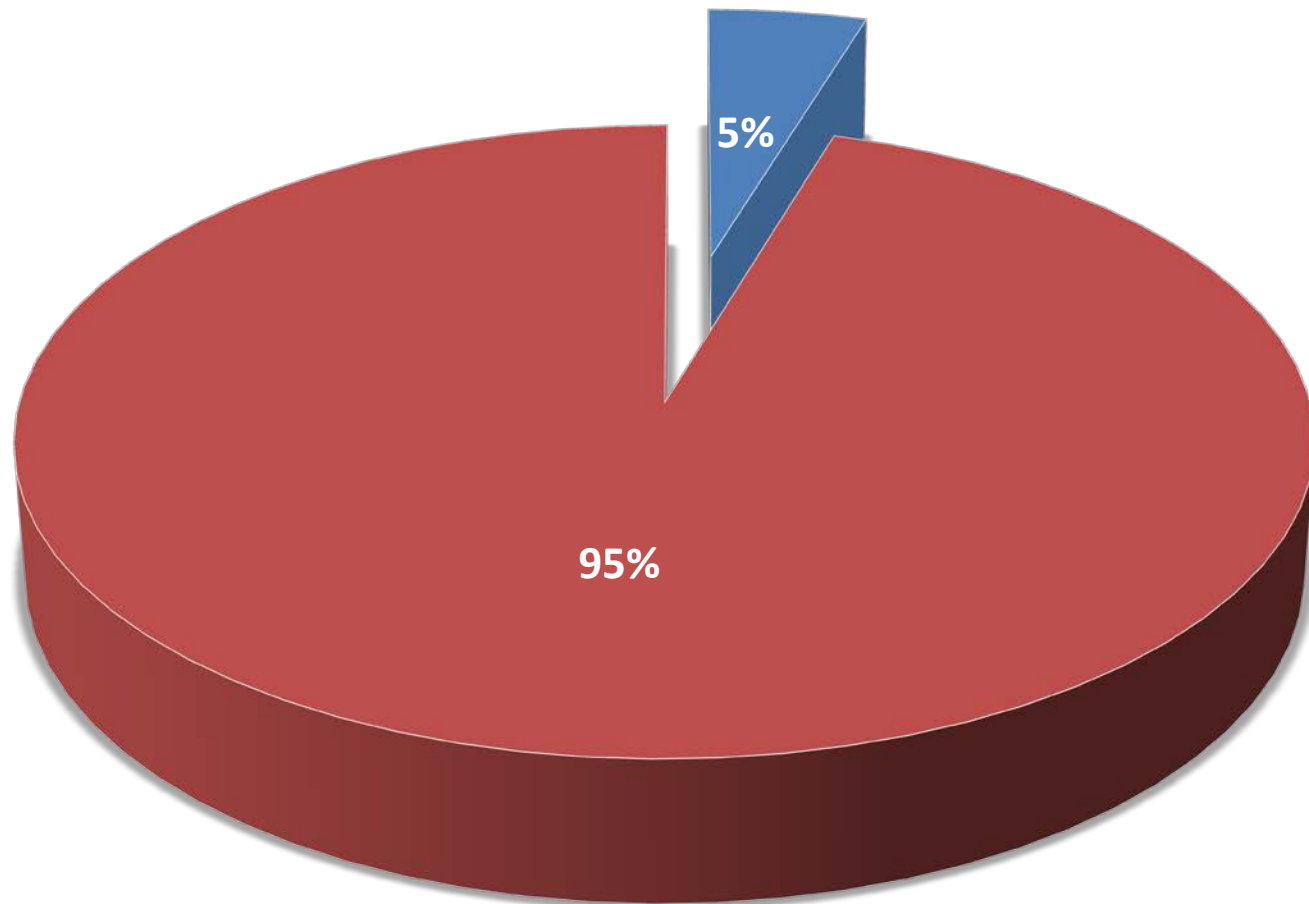
- Natural durable timber
- Water repellent treated timber
- Preservative treated timber

# Lab vs. Field

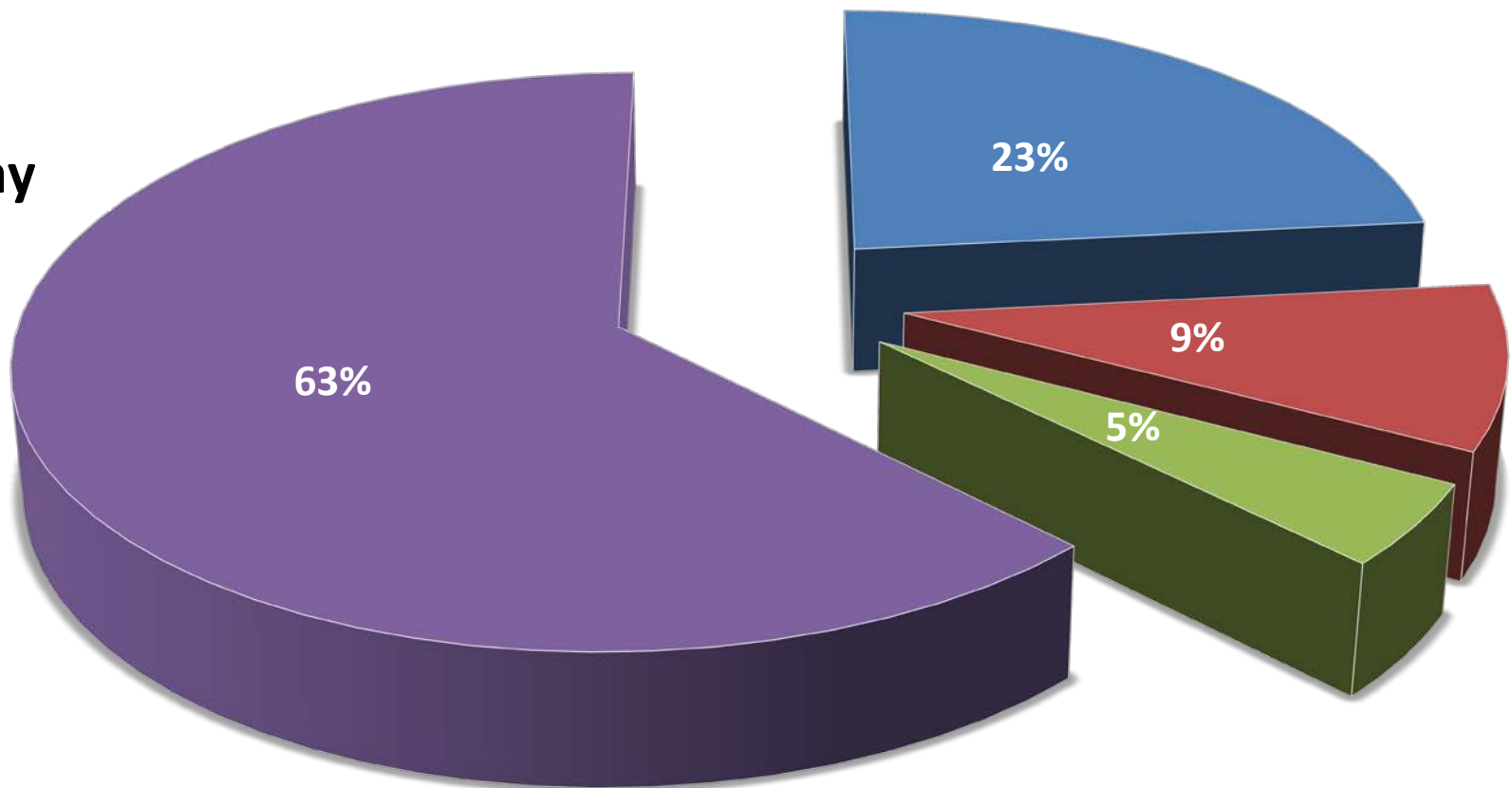
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1004

Leibniz  
Universität  
Hannover

- Lab
- Field



- Germany
- Slovenia
- Italy
- Norway



# Looking forward to your contributions!



[www.irg-wp.com/durability](http://www.irg-wp.com/durability)

