EPH®
SUCCESS BY QUALITY

Entwicklungs- und Prueflabor Holztechnologie GmbH · Zellescher Weg 24 · 01217 Dresden · Germany

Zhejiang Xinhaiye Bamboo Technology Co., Ltd.
Xikou Industrial Zone, Longyou County, Zhejiang
China

Entwicklungs- und Prueflabor
Holztechnologie GmbH
Zellescher Weg 24
01217 Dresden · Germany

Phone: +49 351 4662 0
Fax: +49 351 4662 211
info@eph-dresden.de
www.eph-dresden.de

Dresden, 19.07.2019

Test Report
Order no. 2218044/pos.3

Client:	Zhejiang Xinhaiye Bamboo Technology Co., Ltd. Xikou Industrial Zone, Longyou County, Zhejiang, China
Date of order:	04/12/2018
Order position	ENV 807/EN 350 (fungal resistance: soft rot fungi) Laboratory test of durability against wood decay soft rot fungi according to EN 350 and CEN/TS 15083-2
Contractor:	Entwicklungs- und Prüflabor Holztechnologie GmbH Laboratory Unit Biological Testing Zellescher Weg 24 01217 Dresden Germany
Engineer in charge:	Dipl.-Ing. Kordula Jacobs

Dr. Wolfram Scheiding
Head of Laboratory Biological Testing

The test report contains 3 pages and 2 pages in the annex. Any duplication, even in part, requires written permission of EPH. These test results are exclusively related to the tested material.

Task

Determination of the durability against durability against wood decay soft rot fungi and other soil-born microorganisms according to EN 350 and CEN/TS 15083-2.

Test material

Product name:	DASSO DassoXTR exterior strand woven bamboo decking
Producer:	Jiangxi Zhushang Bamboo Industry Co., Ltd. Gaofu modern Bamboo Industrial Park, Zixi County, Jiangxi Province
Delivery date:	04/12/2018

Test performance

Test standard:	Durability test according to CEN/TS 15083-2:2005; evaluation according to EN 350:2016
Soil:	Floraself (Hornbach, Germany), Charge: 1121707030213:13
Specimens' dimensions:	approx. (100 × 10 × 5) mm^3
Reference wood:	beech (*Fagus sylvatica* L.); mean raw density after kiln drying (645 ± 28) kg/m^3
Replicates:	30 test specimens (10 per test vessel) and 18 reference specimens (6 per test vessel)
Test vessels	three buckets with each 2 kg soil
Ageing procedure:	water leaching according to EN 84:1997 (06/12/2018-20/12/2018)
Fungal attack period:	16 weeks (23/01/2019-15/05/2019)

Validity of test results

The test was valid due to a mean dry mass loss of 32.9 % for the beech reference specimens. The minimum requirement of the test standard is 20.0 %.

Results

Mean dry mass losses are summarized in table 1. The corresponding single values are listed in the appendix. The durability classification based on x-values is given in table 2.

Table 1: Dry mass loss

specimens	dry mass loss [%]		
	mean value	median value	x-value*
test specimens	2.1 ± 0.3	2.1	0.06
reference specimens	32.9 ± 1.6	33.4	-

*x-value = median value of the dry mass loss of test specimens/median value of the dry mass loss of reference specimens

Table 2: Durability classes as specified in EN 350:2016, determined by soft rot lab test acc. to CEN/TC 15083-2

durability class (DC)	description	results of lab test expressed as x values*
DC 1	very durable	$x < 0.10$
DC 2	durable	$0.10 < x \leq 0.20$
DC 3	moderately durable	$0.20 < x \leq 0.40$
DC 4	slightly durable	$0.45 < x \leq 0.80$
DC 5	not durable	$x \leq 0.80$

*x-value = median value of the dry mass loss of test specimens/median value of the dry mass loss of reference specimens

Evaluation

In accordance to EN 350 classification for wood decay soft rot fungi (relevant for applications in use class 4), the test material is assigned to durability class 1 (very durable).

Notice:

Wood products which have been assigned to

- durability class 1 (DC 1) against wood-decay basidiomycetes, in result of a biological test according to CEN/TS 15083-1:2005/EN 84:1997/EN 350:2016 and
- durability class 1 (DC 1) against soft rot fungi, in result of a biological test according to CEN/TS 15083-2:2005/EN 350:2016

can be generally applied in use classes 1 (dry, protected) up to 4 (in ground contact) without additional protective measures against fungal attack, according to EN 460:1994, section 6.2. Use classes are defined in EN 335:2013.

The real performance and the achieved service life are depending from the concrete conditions of the single case (depending e.g. on design, exposure, maintenance), and cannot derived directly from a specific durability class.

Dresden, 19.07.19

Jacobs

.....

Dipl.-Ing. Kordula Jacobs
Person in charge

Single values of the durability test against soft rot fungi using soil (Appendix to test report 2218044/pos.3)

Table A1: Mass loss of the test product (test period 23/01/2019-15/05/2019)

No. of specimen	Dry mass loss [%]	Wood moisture content after removal [%]
1	2.25	39.16
2	1.68	36.43
3	2.28	23.60
4	2.01	30.31
5	2.12	37.91
6	2.47	34.60
7	2.08	27.94
8	1.99	30.07
9	1.93	35.78
10	1.94	27.77
11	1.95	35.14
12	1.95	27.69
13	1.99	36.16
14	1.24	35.25
15	1.60	44.20
16	2.33	31.57
17	2.23	31.93
18	2.47	31.59
19	1.81	47.43
20	2.54	29.15
21	2.22	29.82
22	2.13	30.20
23	1.85	30.94
24	2.29	31.94
25	2.09	29.61
26	1.88	33.80
27	2.40	33.22
28	2.32	34.47
29	1.82	37.85
30	2.20	32.18
Mean values	2.07 ± 0.3	33.26 ± 4.9
Median values	2.1	32.1

Table A2: Mass loss of the reference wood (test period 23/01/2019-15/05/2019)

No. of specimen	Dry mass loss [%]	Wood moisture content after removal [%]
V1	33.63	142.08
V2	31.16	146.98
V3	33.44	143.66
V4	30.40	144.08
V5	32.93	131.70
V6	33.43	154.71
V7	29.22	128.51
V8	34.31	148.76
V9	33.33	135.10
V10	35.45	168.39
V11	33.54	146.23
V12	33.33	157.28
V13	33.55	135.44
V14	31.45	159.31
V15	33.33	173.15
V16	31.58	145.25
V17	35.14	159.61
V18	33.66	150.25
Mean values	32.94 ± 1.6	148.36 ± 11.8
Median values	33.38	146.60