

## Declaration of Performance

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| 1. Ref. no.                             | PM – 005 – 2018  |
| 2. Type                                 | Laminated veneer lumber made from beech  |
| 3. Purpose                              | Laminated veneer lumber according to EN 14374:2005-02 for non-load-bearing, load-bearing and stiffening elements |
| 4. Trade name                           | Board BauBuche S<br>Board BauBuche Q   |
| Manufacturer                            | Pollmeier Furnierwerkstoffe GmbH<br>Pferdsdorfer Weg 6<br>D-99831 Creuzburg                                      |
| 5. Contact details of authorised person | No authorised representative   |
| 6. Constancy of performance             | System 1   |
| 7. Certifying body                      | MPA Stuttgart 0672<br>Certificate of Constancy of Performance No. 0672-CPR-0415                                  |
| 8. Certifying body                      | not relevant   |

**9. Declared performance**

**9.1 Product description**

The laminated veneer lumber is made from glued, dried beech veneer sheets with a width of up to H = 1850 mm and a length of up to L = 35 m.

*Table 1: Structure of Board BauBuche S (beech LVL, parallel ply)*

<b>Element thickness B not sanded – nominal dimension in mm</b>	<b>Element thickness B sanded – nominal dimension in mm</b>	<b>Number of plies</b>	<b>Structure</b>
21	19	7	IIIIIII
21	20	7	IIIIIII
24	22	8	IIIIIIII
27	25	9	IIIIIIIII
30	28	10	IIIIIIIIII
33	30	11	IIIIIIIIIII
33	31	11	IIIIIIIIIII
36	34	12	IIIIIIIIIII
39	37	13	IIIIIIIIIII
42	40	14	IIIIIIIIIII
45	43	15	IIIIIIIIIII
48	46	16	IIIIIIIIIII
51	49	17	IIIIIIIIIII
54	50	18	IIIIIIIIIII
54	52	18	IIIIIIIIIII
57	55	19	IIIIIIIIIII
60	58	20	IIIIIIIIIII
63	60	21	IIIIIIIIIII
63	61	21	IIIIIIIIIII
66	64	22	IIIIIIIIIII
I	ply parallel to long side		

Table 2: Structure of Board BauBuche Q (beech LVL, cross ply)

Element thickness B not sanded – nominal dimension in mm	Element thickness B sanded – nominal dimension in mm	Number of plies			Structure
		parallel	cross	total	
21	19	5	2	7	I-III-I
21	20	5	2	7	I-III-I
24	22	6	2	8	I-III-I
27	25	7	2	9	II-III-II
30	28	8	2	10	II-III-II
33	30	9	2	11	II-III-II
33	31	9	2	11	II-III-II
36	34	10	2	12	III-III-III
39	37	11	2	13	III-III-III
42	40	12	2	14	III-III-III
45	43	13	2	15	III-III-III
48	46	14	2	16	III-III-III
51	49	15	2	17	III-III-III
54	50	16	2	18	III-III-III
54	52	16	2	18	III-III-III
57	55	17	2	19	III-III-III
60	58	18	2	20	III-III-III
63	60	17	4	21	III-II-III-II-III
63	61	17	4	21	III-II-III-II-III
66	64	18	4	22	III-II-III-II-III
I      ply parallel to long side -      ply at right angle to long side					

## 9.2 Application

"Board BauBuche S" and "Board BauBuche Q" laminated veneer lumber according to EN 14374 are approved for use in all non-load bearing, load bearing and stiffening elements dimensioned and produced according to EN 1995-1-1 in conjunction with EN 1995-1-1/NA.

"Board BauBuche S" and "Board BauBuche Q" laminated veneer lumber are approved for use in service classes 1 and 2 according to EN 1995-1-1.

## 9.3 Declared strength, stiffness and density characteristics

Table 3: Characteristic strength and stiffness in N/mm<sup>2</sup>, and density in kg/m<sup>3</sup>

Type of load		Board BauBuche S laminated veneer lumber	Board BauBuche Q laminated veneer lumber	
Nominal thickness in mm		20 ≤ B ≤ 80	≤ 24 <sup>a)</sup>	27 ≤ B ≤ 66
<b>Characteristic strength values</b>				
<b>Flatwise load</b>				
Bending	f <sub>m,0,flat,k</sub>	80	70	81
	f <sub>m,90,flat,k</sub>	---	34	21
Compression	f <sub>c,90,flat,k</sub>	10 <sup>c)</sup>	16 <sup>c)</sup>	
Shear	f <sub>v,0,flat,k</sub>	8	3.8	
<b>Edgewise load</b>				
Bending <sup>b)</sup>	f <sub>m,0,edge,k</sub>	75	54	59
	f <sub>m,90,edge,k</sub>	---	16	9
Tensile    to grain	f <sub>t,0,k</sub>	60	46	49
Tensile ⊥ to grain	f <sub>t,90,edge,k</sub>	1.5	15	8
Compressive    to grain	f <sub>c,0,k</sub>	57.5 <sup>c)</sup>	57 <sup>c)</sup>	62 <sup>c)</sup>
Compressive ⊥ to grain	f <sub>c,90,edge,k</sub>	14	40 <sup>c)</sup>	22 <sup>c)</sup>
Shear	f <sub>v,0,edge,k</sub>	8	7.8	

Type of load		Board BauBuche S laminated veneer lumber	Board BauBuche Q laminated veneer lumber	
Nominal thickness in mm		$20 \leq B \leq 80$	$\leq 24$ <sup>a)</sup>	$27 \leq B \leq 66$
<b>Characteristic stiffness values</b>				
Modulus of elasticity	$E_{0,mean}$	16800	11800	12800
	$E_{0,05}$	14900	10900	11800
	$E_{90,mean}$	470	3500	2000
Shear modulus edgewise	$G_{v,0,edge,mean}$	760	820	
Shear modulus flatwise	$G_{v,0,flat,mean}$	850	430	
<b>Density</b>				
Mean density	$\rho_{mean}$	800	770	800
Charact. density	$\rho_k$	730		
<p>a) "Board BauBuche Q" with a nominal thickness of <math>\leq 24</math> mm according to appendix 2 must not be used in edge bending constructions.</p> <p>b) Values valid for <math>H \leq 300</math> mm. For <math>300 &lt; H \leq 1000</math> mm, the characteristic strength value must be multiplied with coefficient <math>k_h = (300/h)^{0.12}</math>. H is the total cross section in mm relevant for the determination of the bending strength.</p> <p>c) For use in service class 1, the compressive strength may be increased by factor 1.2.</p>				

#### **9.4 Fire safety**

According to the Commission Delegated Regulation (EU) 2017/2293, the products "Board BauBuche S" and "Board BauBuche Q" are in class D-s2, d0. For design values of the charring rates for laminated veneer lumber, see EN 1995-1-2.

#### **9.5 Moisture protection, sound insulation, thermal insulation**

For the required analyses with regard to moisture protection, sound insulation and thermal insulation, the existing regulations, standards and guidelines for glulam ("Board BauBuche S") and laminated veneer lumber for building construction ("Board BauBuche Q") apply. For shrinking and swelling values, see the national annex EN 1995-1-1/NA.

#### **9.6 Formaldehyde class**

With regard to formaldehyde emissions, the laminated veneer lumber products "Board BauBuche S" and "Board BauBuche Q" conform to class E1, in line with the requirements laid down in EN 14374.

### **10. Declaration**

The performance of the products specified in 1 and 2 corresponds to the declared performance in 9. This Declaration of Performance has been issued at the sole responsibility of the manufacturer named in 4.

Signed on behalf of the manufacturer:

Creuzburg, 27 July 2018



Ralf Pollmeier

Managing Director