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Pollmeier

Declaration of Performance

No.: PM – 019 – 2022

1.	Unique identification of product	BauBuche GL75 Beam according to ETA-14/0354 of 20/09/2021
2.	Purpose	Glued laminated timber made of hardwood – structural laminated veneer lumber made of beech according to ETA-14/0354 of 20/09/2021
3.	Manufacturer	Pollmeier Furnierwerkstoffe GmbH Pferdsdorfer Weg 6 99831 Creuzburg
	Manufacturing plants for composite components	Strab Ingenieurholzbau Hermsdorf GmbH Industriestraße 11a 07629 Hermsdorf / Deutschland W. u. J. Derix GmbH & Co. Dam 63 41372 Niederkrüchten / Deutschland Grossman Bau GmbH & Co. KG Äußere Münchener Straße 20 83026 Rosenheim/ Deutschland
4.	Authorised representative	No authorised representative
5.	System of assessment and verification of constancy of performance	System 1
6.	European Assessment Document	EAD 130010-01-0304 "Glued laminated timber made of hardwood - structural laminated veneer lumber made of beech"
	European Technical Approval	ETA-14/0354 of 20/09/2021
	Technical assessment body	Austrian Institute of Construction Engineering (Österreichisches Institut für Bautechnik)
	Notified body	MPA Stuttgart 0672 Certificate number.: 0672 – CPR – 0561

7. Declared performance:

7.1 Product description

This Declaration of Performance applies to glued laminated timber of type "BauBuche GL75 Beam" consisting of plies of laminated veneer lumber made for structural applications. The plies conform to EN 14374.

BauBuche GL75 Beam consists of at least two plies that are glued together. The surfaces are planed or sanded.

This Declaration of Performance does not apply to openings in glued laminated timber made from laminated veneer lumber.

This Declaration of Performance does not apply to treatment with wood preservatives or flame retardants.

The wood species used is European beech (Fagus sylvatica L.).

Table 1: Dimensions and specifications

Feature	Unit	Specification
Height	mm	80 to 1360 (Beam) 300 to 600 (Composite components)
Width	mm	50 to 320 (Beam) 300 to 600 (Composite components)
Length	m	≤ 18.0
Number of layers	-	≥ 2
Camber	-	≤ l/100

7.2 Area of application

BauBuche GL75 Beam is designed for use as load-bearing and non-load-bearing elements in buildings and other timber structures.

The product must only be exposed to static or quasi-static load.

BauBuche GL75 Beam may be used in environments classified in service classes 1 and 2 according to EN 1995-1-1.

BauBuche GL75 Beam elements must be dimensioned by a specialist engineer with experience in the use of products of this type.

For the design of buildings with the product, adequate wood protection and preservation must be taken into account.

Elements made from BauBuche GL75 Beam must be installed according to best practice.

The dimensioning of BauBuche GL75 Beam elements may be based on the specifications in EN 1995-1-1 and EN 1995-1-2, taking into account Annex 1 of the European Technical Assessment. The standards and regulations that apply at the place of use must be observed.

When using fasteners, the provisions of DIN EN 1995-1-1 in conjunction with DIN EN 1995-1-1/ NA and the European Technical Approvals of the respective fasteners must be observed.

The provisions of the European Technical Assessment apply. For the dimensioning of the fasteners, the characteristic density of BauBuche GL75 Beam is 730 kg/m³.

7.3 Declared performances of BauBuche GL 75

Table 2: Mechanical resistance and stability

Relevant property	**Method of assessment**	**Class / service class / numerical value**
Bending strength $f_{m,k}$	EN 408	$k_{h,m}$ * 75 MPa[1)] at $k_{h,m} = \left(\frac{600}{h}\right)^{0.10}$
Modulus of elasticity parallel to grain in plies		
– $E_{0,mean}$	EN 408	16,800 MPa
– $E_{0,05}$	EN 408	15,300 MPa
Modulus of elasticity perpendicular to grain in plies		
– $E_{90,mean}$	EN 14374	470 MPa
– $E_{90,05}$	EN 14374	400 MPa
Tensile strength		
– parallel to grain in plies $f_{t,0,k}$	EAD 130010-01-0304	$k_{h,t}$ * 60 MPa [2)] at $k_{h,t} = \left(\frac{600}{h}\right)^{0.10}$
– perpendicular to grain in plies $f_{t,90,k}$	EN 384	0.6 MPa

1) h is the height of the BauBuche GL75 Beam in mm

2) h is the length of the longer side of the BauBuche GL75 Beam perpendicular to the longitudinal axis in mm

Relevant property	Method of assessment	Class / service class / numerical value	
Compressive strength		Service class 1	Service class 2
– parallel to grain in plies $f_{c,0,k}$	EN 408 and EAD 130010-01-0304	59.4 MPa[3)]	49.5 MPa[3)]
– perpendicular to grain in plies $f_{c,90,k}$	EN 384 and EAD 130010-01-0304	14.8 MPa	12.3 MPa
Shear strength $f_{v,k}$	EN 408	$k_{h,v}$ * 4.5 MPa [4)] with $k_{h,v}=\left(\frac{600}{h}\right)^{0.13}$	
Shear modulus			
– G_{mean}	EN 14374	850 MPa	
– G_{05}	EN 14374	760 MPa	
Density			
– ρ_{mean}		≥ 800 kg/m^3	
– ρ_k		≥ 730 kg/m^3	

3) For n > 3, the characteristic compressive strength may be multiplied by factor $k_{c,0}$= min $\left\{\frac{0.0009 * h + 0.892}{1.18}\right\}$ where *h* is the height of the BauBuche GL75 Beam cross-section in mm and *n* is the number of plies

4) h is the height of the BauBuche GL75 Beam in mm

7.4 Fire safety

Relevant property	Method of assessment	Class / service class / numerical value
Fire behaviour	Commission Decision 2005/610/EC	Euro class D-s2, d0
Fire resistance	EN 1995-1-2	Burning rate β_0 = 0.65 mm/min β_n = 0.7 mm/min

7.5 Moisture protection, sound insulation, thermal insulation

Relevant property	Method of assessment	Class / service class / numerical value
Creep characteristics and duration of load	k_{mod} and k_{def} according to EN 1995-1-1 for glued laminated timber	
Dimensional stability	During use, the moisture content must not change to such a degree that undesirable deformation occurs	
Moisture content	EAD 130010-01-0304	5 to 10 %
Bonding quality	EN 14374	pass
Bonding quality of composite components	EAD 130010-01-0304	pass
Service classes	EN 1995-1-1	1 and 2
Sound insulation	not assessed	
Thermal conductivity λ	EN ISO 10456	0.17 W/(m·K)
Thermal inertia, specific thermal capacity c_p	EN ISO 10456	1,600 J/(kg·K)

7.6 Formaldehyde class

Relevant property	Method of assessment	Class / service class / numerical value
Formaldehyde	EN 717-1	E1

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The performance of the named product conforms to that specified in this document. In accordance with Regulation (EU) No. 305/2011, the named manufacturer of the product is solely responsible for the content of this Declaration of Performance.

Signed on behalf of the manufacturer by:

Patrick Rodlberger (Managing Director)

Creuzburg, 24. November 2022

Signature