

## **Declaration of Performance**

Nr. DOP-EYFG-RE-003

1.	Unambiguous ID code of the product type:	VIGAM – Glued laminated timber made from oak without preservative treatment
2.	Intended use:	Structural or non structural elements in buildings and timber structures. Subjected to static or quasi static actions only.
3.	Manufacturer:	Elaborados y Fabricados Gámiz, S.A.
		Ctra. Vitoria-Estella, 2
		01110 Sta. Cruz de Campezo (Álava)
		España
4.	Authorized representative:	No external authorized representative
	•	
5.	System for assessing and verifying the constancy of per	•
5.		•
5. 6b.		formance:
•	System for assessing and verifying the constancy of per	formance: System 1
•	System for assessing and verifying the constancy of per European Assessment Document:	formance: System 1 0672-CPD-I 14.21.58

## 7. Performance declared:

Essential characteristics		Performance
Mechanical properties as		
Modulus of elasticity:		
Bending strength	f <sub>m,k</sub> :	33 MPa <sup>1) 2)</sup>
Tensile strength	<b>f</b> t,0,k:	23 MPa
	<b>f</b> t,90,k:	0,6 MPa
Compressive strength	<b>f</b> c,0,k:	45 MPa <sup>3)</sup>
	<b>f</b> c,90,k:	8 MPa
Shear strength	f <sub>v,k</sub> :	4 MPa



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E <sub>0,mean</sub> :	14 400 MPa	
E <sub>0,05</sub> :	12 000 MPa	
E <sub>90,mean</sub> :	800 MPa	
E <sub>90,05</sub> :	660 MPa	
G <sub>mean</sub> :	850 MPa	
G <sub>0,05</sub> :	700 MPa	
	E0,05: E90,mean: E90,05: Gmean:	E <sub>0,05</sub> :       12 000 MPa         E <sub>90,mean</sub> :       800 MPa         E <sub>90,05</sub> :       660 MPa         G <sub>mean</sub> :       850 MPa

## Notes:

<sup>1)</sup> 1 MPa = 1 N/mm<sup>2</sup>

<sup>2)</sup> The characteristic strength property for lamellas loaded in flat bending and H<400 mm may be multiplied by

$$k_h = \min\left\{ \left(\frac{400}{H}\right)^{0.14}; 1, 1 \right\}$$

<sup>3)</sup> For Service class 2 the characteristic value of compression strength shall be reduced by1/3

Geometric data		Widths ranging between 50 mm and 160 mm Heights ranging between 80 mm and 400 mm Lengths of up to 12 m The relevant product dimensions can be taken from the accompanying documents	
Dimensions and specifications of the boards			
Thickness (Planed dimension)		20 ± 2 mm	
Boards shall be graded with visual procedure:			
Cover layer (≥ H/6 per side; min. 2 lamellas):		LS 13	
Inner layer:		LS 10	
Profile of finger joints:		min. 10 x 3,8 mm	
Distance of finger joints:		300 hasta 1 200 mm	
Bonding strength as			
Bending strength of finger joints			
- Paralel to the grain	f <sub>m,j,k</sub> :	LS 10: 49 MPa / LS 13: 51 MPa	
Glue line integrity:		Delamination test pursuant to EN 14080, Annex C, Method B	





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Durability of bonding strength as		
Species, Source Adhesive	European Oak (Quercus robur y Quercus petraea) France Adhesive for finger-joints:	
	MUF, Type I Adhesive for surface bonding: MUF, Type I	
Durability against biological attack as		
Natural durability class against wood stroying fungi EN 350-2	2	
Fire resistance as		
<ul> <li>Charring rate as</li> <li>Charring of more layers than the cover layer</li> <li>Characteristic density</li> </ul>	β <sub>n</sub> : 0,55 mm/min. 690 kg/m³	
Especie de madera  Reaction to fire as	Roble europeo (Quercus robur y Quercus petraea)	
Reaction to fire class	D-s2, d0 Commission decision 2003/43/EG, as amended	
Energy economy and heat retention		
Thermal conductivity, $\lambda$ Thermal inertia, Specific heat, c <sub>p</sub>	0,18 W/(m·K) 1.600 J/(kg·K)	
Emission of formaldehyde as		
Formaldehyde emission class	E 1	
Release of other dangerous substances		
Release of other dangerous substances	Not relevant	



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The performance of the above product conforms to the performance declared. The above named manufacturer is exclusively responsible for preparing the Declaration of Performance in accordance with Regulation EU/305/2011.

Signed on behalf of the manufacturer and in his name by:

Felix Flüshöh (Chief Operating Officer) (Name and function)

Sta. Cruz de Campezo (España), 01.07.2013 (Place & date of issue)



(Signature)







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