

Declaration of Performance Glued laminated timber strengthclass GL24, GL28, GL30, GL32h h (homogenous) and c(combined) made of spruce, no treatment with protecting agents according to 14080:2013.

1 Number

2020GL24283032h

2 Unique identification code:

Glued laminated timber GL24h;GL28h;GL30h;GL32h and GL24c;GL28c;GL30c;GL32c

3 Type, charge or serial number or other possibilities for the identification of the construction product is:

The date of production can be dicovered by package number.

4 Application:

Buildings and bridges

5 Manufacturer:

AS Palmako, Näituse 25, 50408 Tartu, Estonia

6 Authorized person:

No authorized person

7 System of assessment and verification of constancy of performance:

System 1

8 If the construction product is regulated by a harmonized standard:

The notified body Materialprüfungsanstalt Universität Stuttgart (MPA Stuttgart, Otto-Graf-Institut (FMPI)) – 0672 has, regarding the gluing strength and fire resistance, carried out the determination of the product type according to the initial test and the initial inspection of the factory and factory own quality control, as well as ongoing inspection assessment and evaluation of the factory own production control issued the EC certificate of conformity No.0672 – CPR - 0465.

9 Notified body:

Nr. 0672

10 Declared performance:

GL24h

Modulus of elasticity $E_{0,g,mean}$ 11500 N/mm²

Bending strenght $f_{m,g,k}$ 24 N/mm²

Compression strenght $f_{c,0,g,k}$ 24 N/mm²

Tensile strenght $f_{t,0,g,k}$ 19,2 N/mm²

Shear strenght $f_{v,g,k}$ 3,5 N/mm²

GL28h

Modulus of elasticity $E_{0,g,mean}$ 12600 N/mm²

Bending strenght $f_{m,g,k}$ 28 N/mm²

Compression strenght $f_{c,0,g,k}$ 28 N/mm²

Tensile strenght $f_{t,0,g,k}$ 22,3 N/mm²

Shear strenght $f_{v,g,k}$ 3,5 N/mm²

GL30h

Modulus of elasticity $E_{0,g,mean}$ 13600 N/mm²

Bending strenght $f_{m,g,k}$ 30 N/mm²

Compression strenght $f_{c,0,g,k}$ 30 N/mm²

Tensile strenght $f_{t,0,g,k}$ 24 N/mm²

Shear strenght $f_{v,g,k}$ 3,5 N/mm²

GL32h

Modulus of elasticity $E_{0,g,mean}$ 14200 N/mm²

Bending strenght $f_{m,g,k}$ 32 N/mm²

Compression strenght $f_{c,0,g,k}$ 32 N/mm²

Tensile strenght $f_{t,0,g,k}$ 25,6 N/mm²

Shear strenght $f_{v,g,k}$ 3,5 N/mm²

GL24c

Modulus of elasticity $E_{0,g,mean}$ 11000 N/mm²

Bending strenght $f_{m,g,k}$ 24 N/mm²

Compression strenght $f_{c,0,g,k}$ 21,5 N/mm²

Tensile strenght $f_{t,0,g,k}$ 17 N/mm²

Shear strenght $f_{v,g,k}$ 3,5 N/mm²

GL28c

Modulus of elasticity $E_{0,g,mean}$ 12500 N/mm²

Bending strenght $f_{m,g,k}$ 28 N/mm²

Compression strenght $f_{c,0,g,k}$ 24 N/mm²

Tensile strenght $f_{t,0,g,k}$ 19,5 N/mm²

Shear strenght $f_{v,g,k}$ 3,5 N/mm²

GL30c

Modulus of elasticity $E_{0,g,mean}$ 13000 N/mm²

Bending strenght $f_{m,g,k}$ 30 N/mm²

Compression strenght $f_{c,0,g,k}$ 24,5 N/mm²

Tensile strenght $f_{t,0,g,k}$ 19,5 N/mm²

Shear strenght $f_{v,g,k}$ 3,5 N/mm²

GL32c

Modulus of elasticity $E_{0,g,mean}$ 13500 N/mm²

Bending strenght $f_{m,g,k}$ 32 N/mm²

Compression strenght $f_{c,0,g,k}$ 24,5 N/mm²

Tensile strenght $f_{t,0,g,k}$ 19,5 N/mm²

Shear strenght $f_{v,g,k}$ 3,5 N/mm²

Mechanical properties of the strength classes GL 24, GL28, GL30, GL32 h according to EN 14080:2013 table 5 and c according to table 4. Assignment of the delivered components to the strength classes can be obtained from accompanying documentation.

Geometrical data

Width from 42 mm to 240 mm

Height from 80 mm to 1250 mm

Length up to 18 m

The corresponding dimensions can be obtained from the accompanying documentation.

Gluing strength

Bending strength of finger joints

In accordance with EN 14080 requirements, table 2 and 3

Adhesive joints integrity of the surface gluing

Test for delaminating according to EN 14080, annex C, method B

Durability of the gluing strength

Type of wood

Spruce (Picea abies)

Glue type

Glue for finger joints: PUR, type of glue I

Glue for surface gluing: MUF, type of glue I

Durability against biological attack

Natural durability class against fungi attack EN 350-2 (no treatment with protecting agents)

5

Fire resistance

Geometrical data

See „Geometrical data“

Burnup rate as

- Characteristic densit

Characteristic density of the relevant strength class

- Type of wood

Spruce (Picea Abies)

Fire behavior class

Class of reaction-to-fire performance:

D-s2, d0 according to EN 14080, table 11

Emission of Formaldehyde

E 1

Release of dangerous substances

Not relevant

11 The performance of the named product is in conformity with the declared performance. This declaration of performance is issued in accordance with (EU) regulation no. 305/2011, under the sole responsibility of the above mentioned manufacturer.

AS Palmako

Silver Simenson

Production manager

09.01.2024