



ÉMI NON-PROFIT LIMITED LIABILITY COMPANY FOR
QUALITY CONTROL AND INNOVATION IN BUILDING

H-2000 Szentendre, Dózsa Gy. út 26.
Phone: (36-1) 372 6100
Fax: (36-1) 386 8794
E-mail: info@emi.hu
Website: www.emi.hu



MEMBER OF EOTA
www.eota.eu

EUROPEAN TECHNICAL ASSESSMENT

ETA – 15/0873
of 08.02.2016.

I GENERAL PART

Technical Assessment Body issuing the ETA

ÉMI Építésügyi Minőségellenőrző Innovációs
Nonprofit Kft.

Trade name of the construction product

GARTENPRO SYSTEM

Product family to which the construction product belongs

Log building kit

Manufacturer

GARTENPRO Termelési és Kereskedelmi Kft.
Fertőszentmiklós Pf. 6.
H-9444, Hungary

Manufacturing plant(s)

GARTENPRO Termelési és Kereskedelmi Kft.
Soproni úti Ipartelep
Fertőszentmiklós
H-9444, Hungary

This European Technical Assessment contains

13 pages including Annex A.1 and Annex A.2

This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of

Guideline for European Technical Approval ETAG
007, edition November 2012, used as European
Assessment Document (EAD)

The original official language of this European Technical Assessment is Hungarian. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full (except the confidential Annex(es) referred to above).

II SPECIFIC PARTS

1 TECHNICAL DESCRIPTION OF THE PRODUCT

1.1 General

Gartenpro System is a log building kit which consists of pre-designed and pre-fabricated building elements including walls, ground floors and roofs.

The kits covered by this ETA usually contain the log frame and the timber parts needed, windows and doors and bituminous roofing as well as metal fixings. The main load-bearing construction of the building kits is made of the log frame.

Typical solutions and building configurations are given in Annex A.1. The materials and components which make up the log building kit are specified in Annex A.2.

Maximum sizes of buildings made from the kit depending on the wall thickness are given in Table 1.

Table 1.

Wall thickness	Max. size	Max. roof height	Max. wall height
14 mm*	240 x 240 cm	220 cm	180 cm
18 mm	270 x 270 cm	236 cm	193 cm
28 mm	380 x 380 cm	277 cm	209 cm

* Logs are reinforced by and fixed to a 21/28 mm timber batten

Service installations and complementary structures, including foundations or substructures, are not part of the kit.

This European Technical Assessment does not comprise the substructure of the building. The maximum required tolerances of the substructure dimensions are ± 5 mm. The maximum required tolerances of the substructure levelling are ± 5 mm.

The kit is erected according to the details given in the manufacturer's technical documentation and installation manual provided for each package.

Further information on package, transport and storage is laid down in the manufacturer's technical documentation. The identification parameters and reference to product specifications for identifying the materials and components which constitute the kit are given in Annex A.2.

1.2 Load-bearing walls

The load-bearing walls consist of timber logs with a thickness of 14 mm, 18 mm or 28 mm. Wall logs with a thickness of 14 mm are reinforced and fixed to timber battens with a size of 21/28 mm by nails and glue. Maximum width of openings at windows and doors is 140 cm. The maximum wall heights are given in Table 1.

1.3 Ground floors

The ground floors consist of treated timber members with a size of 38/38 mm or 60/40 mm for 14 mm thick logs or 18 mm and 28 mm thick logs respectively. The timber members are secured by screws to the concrete substructure and covered by timber boards with a thickness of 15 mm. The boards are fixed by nails. The distance between the timber members is about 50-60 cm depending on the building size.

1.4 Roofs

The roofs consist of horizontal timber purlins with a maximum spacing of 1000 mm with a size of 43/90 mm. Roof timber boards with a thickness of 15 mm are laid on the top of the rafters and secured with nails. The roof structure is covered by bituminous membranes. The membranes are fixed with nails.

2 SPECIFICATION OF THE INTENDED USE(S) IN ACCORDANCE WITH THE APPLICABLE EUROPEAN ASSESSMENT DOCUMENT (HEREINAFTER EAD)

The log building kit is intended to be used mainly as unheated storage buildings in gardens or holiday cottages with low performance requirements.

The kit should not be used in conditions with heavy wind and driving rain without protective measures (as special gaskets) for uses with higher demands of water and air tightness.

The use of the kit in regions where termite attack can occur is impermissible without additional chemical treatment.

The provisions made in this European Technical Assessment are based on a working life of the kit of 25 years for all parts provided the kit is subject to appropriate use and maintenance.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or the Technical Assessment Body, but are to be regarded only as a means for choosing the appropriate product in relation to the expected, economically reasonable working life of the works.

Note: The completed building (the works) shall comply with the building regulations (regulations on the works) applicable in the Member States in which the building is to be constructed. The procedures foreseen in the Member State for demonstrating compliance with the building regulations shall also be followed by the entity held responsible for this act. The European Technical Assessment does not amend this process in any way.

3 PERFORMANCE OF THE PRODUCT AND REFERENCES TO THE METHODS USED FOR ITS ASSESSMENT

Table 2

Basic Work Requirements (BWR)	Essential characteristic	Method of verification	Performance
BWR 1	Resistance of wall, floor and roof structures and their connections against vertical and horizontal loads	Clause 2.4.1 of ETAG 007	Clause 3.1 of this ETA
BWR 2	Reaction to fire of materials and components	Clause 2.4.2.1 of ETAG 007	Clause 3.2.1 of this ETA
	Resistance to fire	Clause 2.4.2.2 of ETAG 007	No performance assessed
	External fire performance of roof covering	Clause 2.4.2.3 of ETAG 007	No performance assessed
BWR 3	Vapour permeability and moisture resistance	Clause 2.4.3.1 of ETAG 007	No performance assessed
	Watertightness - external envelope	Clause 2.4.3.2 of ETAG 007	Clause 3.3.2 of this ETA
	Content and/or release of dangerous substances	Clause 2.4.3.3 of ETAG 007	Clause 3.3.3 of this ETA
BWR 4	Slipperiness of floors	Clause 2.4.4.1 of ETAG 007	No performance assessed
	Impact resistance	Clause 2.4.4.2 of ETAG 007	No performance assessed
BWR 5	Airborne sound insulation of walls, floors and roof structures	Clause 2.4.5.2 of ETAG 007	No performance assessed
	Impact sound insulation of floors	Clause 2.4.5.3 of ETAG 007	No performance assessed
	Sound absorption	Clause 2.4.5.4 of ETAG 007	No performance assessed
BWR 6	Thermal resistance	Clause 2.4.6.1 of ETAG 007	No performance assessed
	Air permeability	Clause 2.4.6.2 of ETAG 007	No performance assessed
	Thermal inertia	Clause 2.4.6.3 of ETAG 007	No performance assessed
BWR 7	Sustainable use of natural resources	No performance assessed	

3.1 Mechanical resistance and stability (BWR 1)

3.1.1 Resistance of wall, floor and roof structures and their connections against vertical and horizontal loads

The components of the kit and their detailed material specifications, which are necessary for the mechanical resistance and stability, are listed in Annex A.2.

Mechanical resistance and stability of each load-bearing component as well as the joints between these components are to be determined on the basis of this exact description. During the calculation the respective requirements of the Member States shall be taken into account.

For indication of the geometrical data of the components and of properties of the materials and constituent products according to ETAG 007 Method 1 is used. Method 1 includes indication of geometrical data of the installed system and the components of the kit and of properties of the materials and constituent products used by reference to the respective product specification

No special verification of structural resistance related to seismic actions has been determined.

Buildings made from the Gartenpro System log building kit are lightweight structures that need to be anchored to the substructure. Anchorage is dealt with as a part of design of works.

No performance is assessed for resistance against wind loads for windows and doors.

3.2 Safety in case of fire (BWR 2)

3.2.1 Reaction to fire of materials and components

The classification of the main materials with regard to reaction to fire is given in Annex A.2.

3.2.2 Resistance to fire

No performance assessed.

3.2.3 External fire performance of roof

No performance assessed.

3.3 Hygiene, health and environment (BWR 3)

3.3.1 Vapour permeability and moisture resistance

No performance assessed.

3.3.2 Watertightness

3.3.2.1 External envelope

No gasket is used between the logs. Some water may penetrate through the log joints. It is not recommended that the kit is used when this is not tolerated or in conditions with heavy driving rain. No performance is assessed for watertightness for windows and doors.

3.3.2.2 Internal surfaces

No performance assessed.

3.3.3 Content and/or release of dangerous substances

The kit complies with the provisions of the European Parliament and of the Council Regulations No 1272/2008/EC and 1907/2006/EC.

A declaration of conformity in this respect was made by the manufacturer.

Chemically treated wood will be used only if national legislation demands it. Any chemical wood treatment that may be used shall follow national provisions and the provisions of the Biocide Directive.

In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the product falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Product Regulation, these requirements need also to be complied with, when and where they apply.

3.4 Safety and accessibility in use (BWR 4)

3.4.1 Slipperiness of floor finishes

No performance assessed. Floor finishes are not part of the kit.

3.4.2 Impact resistance

No performance assessed.

3.5 Protection against noise (BWR 5)

3.5.1 Airborne sound insulation

No performance assessed.

3.5.2 Impact sound insulation

No performance assessed.

3.5.3 Sound absorption

No performance assessed.

3.6 Energy economy and heat retention (BWR 6)

3.6.1 Thermal resistance

Buildings made from the Gartenpro System log building kit are unheated so no performance has been assessed for thermal resistance.

3.6.2 Air-permeability

No performance assessed.

3.6.3 Thermal inertia

No performance assessed.

3.7 Sustainable use of natural resources (BWR 7)

There is no relevant performance assessed regarding this essential requirement.

3.8 Durability aspects

The timber species used in the kit is in natural durability class 4 and class S in relation to fungus attack and insect attack respectively in accordance with EN 350-2.

The adequacy of the hazard classes/use classes according to EN 335-1, -2 and -3 for wood products used in the kit are given in Table 4 below.

Table 4

Component type	Hazard class/use class
Wall members	3
Roof members	2
Ground floor members	3

The adequacy of the service classes according to EN 1995-1-1 for the metal fasteners used in the kit is class 2.

The use of the kit in regions where termite attack can occur is impermissible without additional chemical treatment.

In principle, the components are executed without chemical treatment. The wall members and ground floor members exposed to direct weathering may be chemically treated. Any chemical treatment that may be used shall follow national and European provisions (e.g. Biocide Directive).

4 ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (HEREINAFTER AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE

According to decision 99/455/EC of the European Commission (EC OJ N°L178, 14.7.1999, p.56) AVCP system of 1 is applied (see Annex V of Regulation (EU) 305/2011).

5 TECHNICAL DETAILS NECESSARY FOR THE IMPLEMENTATION OF THE AVCP SYSTEM, AS PROVIDED FOR IN THE APPLICABLE EAD

5.1 Tasks of the manufacturer

5.1.1 Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures. This production control system ensures that the product is in conformity with the European Technical Assessment.

The manufacturer shall only use materials stated in the technical documentation¹ of this European Technical Assessment.

In the framework of factory production control the manufacturer carries out controls in accordance with the control plan² which is fixed with this European Technical Assessment.

Details of the extent, nature and frequency of controls to be performed within the factory production control correspond to this control plan which is part of the technical documentation of this European Technical Assessment.

The results of factory production control are recorded in checklists signed by the person responsible and are evaluated. The records shall be presented to the approved body involved in continuous surveillance.

5.1.2 Further testing of samples taken at the factory

No further tests are required in addition to those laid down in the control plan.

5.2 Tasks of the notified product certification body

5.2.1 Assessment of the performance of the construction product

Notified bodies undertaking tasks under System 1 shall consider the European Technical Assessment issued for the construction product in question as the assessment of the performance of the product. Notified bodies shall therefore not undertake the tasks referred to in point 1.2.(b)(i) in Annex V of Regulation (EU) No 305/2011.

5.2.2 Initial inspection of the manufacturing plant and of factory production control

The notified product certification body shall ascertain that, in accordance with the control plan, the manufacturing plant, in particular personnel and equipment, and the factory production control are suitable to ensure a continuous and orderly manufacturing of the kit according to the specifications given in clause 2 and in the Annexes of this European Technical Assessment.

¹ Technical documentation of this European Technical Assessment is deposited at ÉMI Nonprofit Kft. and it will be provided for the notified certification body involved in the procedure regarding the assessment and verification of constancy of performance of the product.

² Control plan is deposited at ÉMI Nonprofit Kft. and it will be provided for the notified certification body involved in the procedure regarding the assessment and verification of constancy of performance of the product.

5.2.3 Continuous surveillance, assessment and evaluation of factory production control

The notified product certification body shall visit the factory at least twice a year for surveillance of the manufacturer. However, this may be reduced to once a year if the manufacturer has proven good product quality over a long period of time.

It has to be verified that the system of factory production control and the specified manufacturing process are maintained taking into account the control plan.

Continuous surveillance and assessment of factory production control have to be performed according to the control plan.

Issued in Szentendre on 08.02.2016.

by

ÉMI Építésügyi Minőségellenőrző Innovációs Nonprofit Kft.

Zoltan Budavari

head of technical assessment office

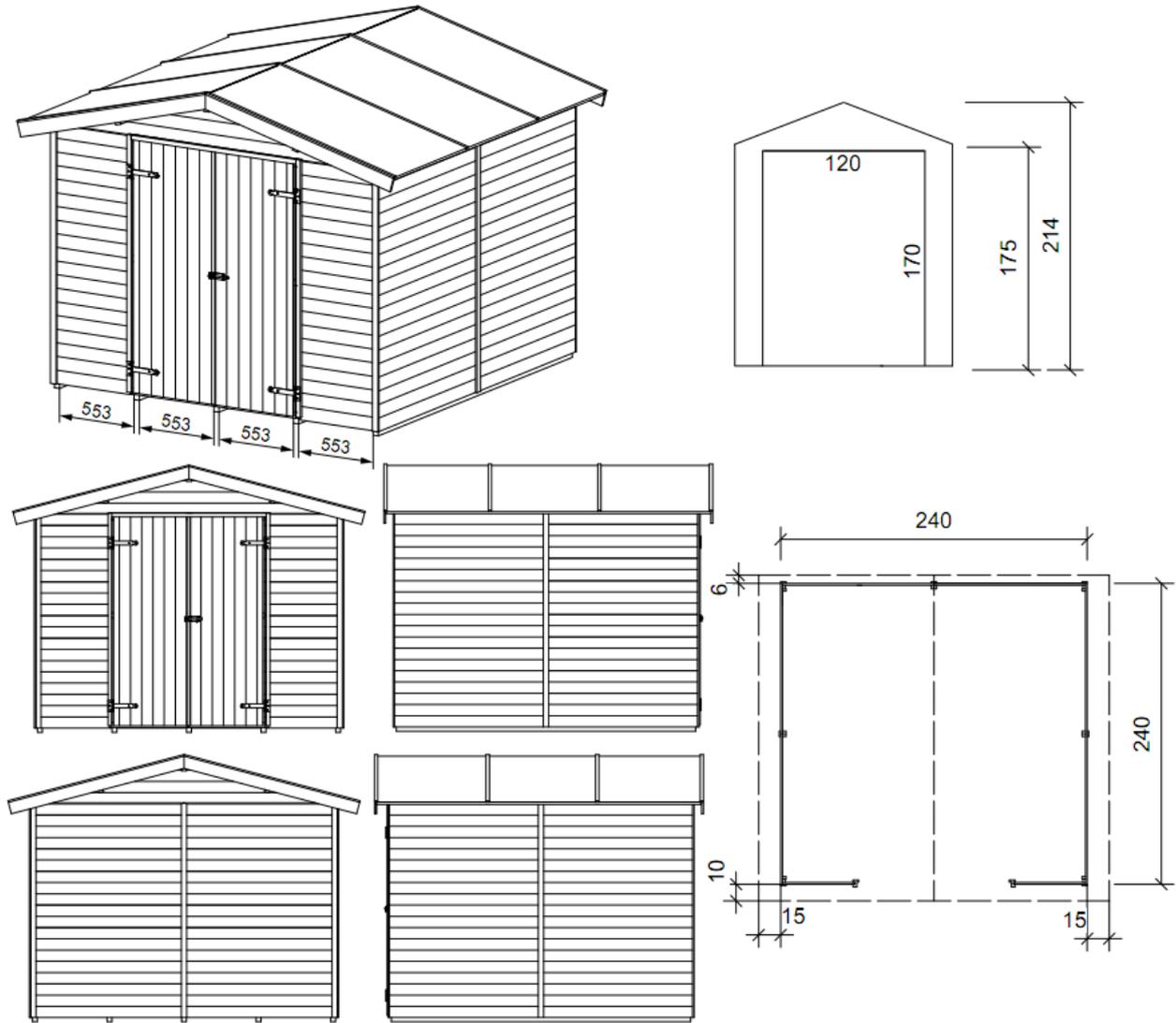
ANNEXES

ANNEX A.1.

Typical building configurations

ANNEX A.2.

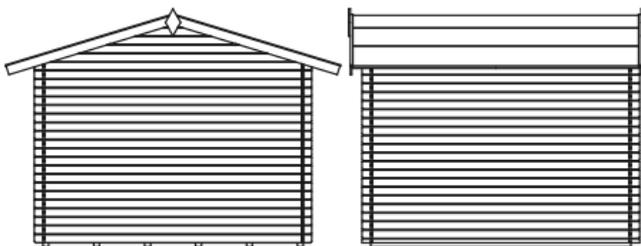
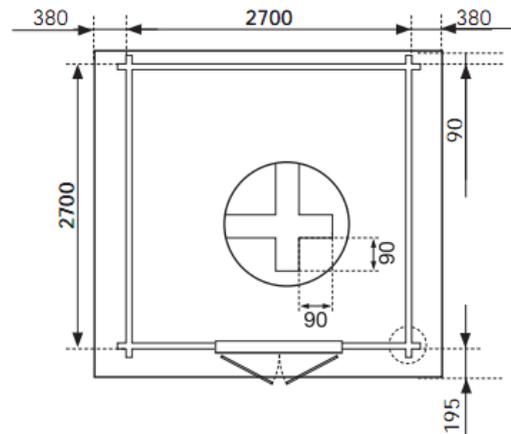
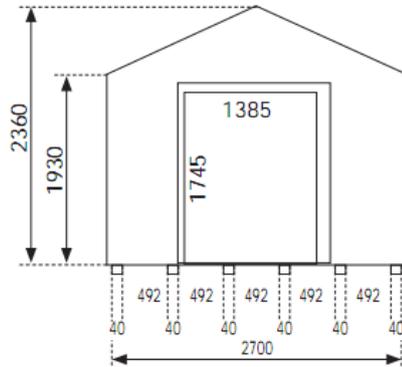
Specification of materials and components



Typical building configuration with a wall thickness of 14 mm

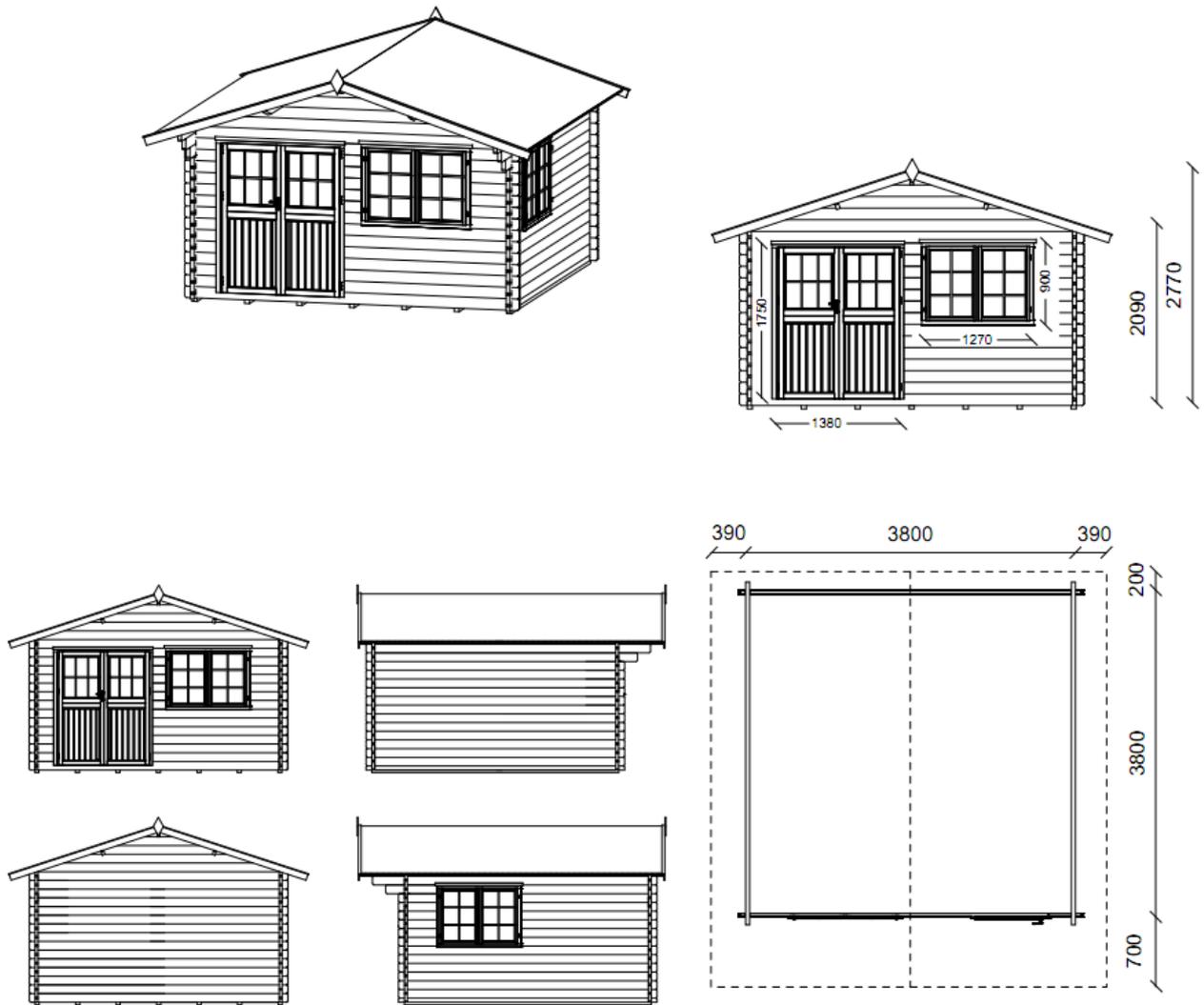
GARTENPRO SYSTEM

ANNEX A.1



Typical building configuration with a wall thickness of 18 mm

GARTENPRO SYSTEM	ANNEX A.1
-------------------------	------------------



Typical building configuration with a wall thickness of 28 mm

GARTENPRO SYSTEM

ANNEX A.1

Component / material	Technical specification	ρ (kg/m ³)	λ (W/mK)	Vapour resistance (dry) $\mu = 50$	c (kJ/kgK)	Reaction to fire class	
Log frame	C24 to EN 338	420	0,13	$\mu = 50$	1,60	D-s2,d0*	2003/43/EC ⁽¹⁾
Structural timber components (purlins, ground floor supports)	EN 14081-1+A1 C24 to EN 338	420	0,13	$\mu = 50$	1,60	D-s2,d0*	2003/43/EC ⁽¹⁾
Timber boards for floors and roofs	EN 14915	390	0,13	$\mu = 50$	1,60	no performance assessed	-
Doors and windows	EN 14351-1	no performance assessed					
Structural metal fasteners – dowels, screws, nails	EN 14592 various sizes	-	-	-	-	A1	96/603/EC ⁽²⁾
Bituminous roofing	EN 13707	Tensile properties ≥ 150 N/50mm lengthwise ≥ 100 N/50mm crosswise External fire performance No performance assessed Watertightness 20 kPa				E	EN 13501-1
1) Amended by Commission Decisions 2003/593/EC, 2006/673/EC and 2007/348/EC							
2) Amended by Commission Decisions 2000/605/EC and 2003/424/EC							

* Only for members with a thickness of greater than 22 mm

GARTENPRO SYSTEM	ANNEX A.2
-------------------------	------------------