

BauBuche Beech laminated veneer lumber

Wood preservation and surface treatment

09



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 - Koch und Schulte GmbH & Co.KG

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9.1 Protection against moisture during transport and installation

BauBuche shrinks and swells more than standard softwood. In particular, exposure of end-grain surfaces (ends of beams, step joints, incisions, drill holes, etc.) to moisture can result in significant expansion of the cross-section. Moisture can also leave behind spots on the material.

To prevent damage during transport and installation, we recommend treating the BauBuche elements with a protective coating that minimises moisture absorption.

For suitable coating products, see appendix A.

9.2 Protection against UV light

UV radiation breaks down the lignin contained in the beech lumber, so that the timber surface becomes dull and grey over time. A UV protection coating prevents the decomposition of lignin and helps retain the natural warm beech colour of BauBuche.

9.3 Varnishes, stains and oils

As beech has good absorption properties, it can be easily treated with stains, varnishes and oils.

Our BauBuche Flooring products are available in a range of colours with or without industrially sealed surfaces, or as varnished and oiled elements.

For instructions on how to achieve similar hues on other BauBuche products, using varnish, oil and moisture protection (see above), please refer to the appendix.

9.4 Wood preservation according to DIN 68800

Wood preservation aims at retaining the stability and serviceability of timber construction elements.

The wood preservation standards (DIN 68800-1 and DIN 68800-2) must therefore always be taken into account when dimensioning a construction. The regulations below apply to buildings in Germany.

For other countries, please refer to the regulations that apply there.

Use classes

DIN 68800-1 classifies timber construction elements in use classes (abbreviation UC). These classes are based on the potential risk of damage after installation, caused by moisture, fungi and other micro-organisms. The hazards posed by wood-destroying insects and fungi, rot and aqueous wood-destroying organisms as well as damage caused by leaching. The use class of a construction material can be influenced by construction measures.

Definition of use classes and service classes

For reasons of static strength, BauBuche is only approved for use in service classes 1 and 2 according to DIN EN 1995-1-1. Service class 1 covers indoor areas, while service class 2 refers to use under a roof without direct exposure to the elements. The strength and stiffness of a constructive timber product depend on its moisture content along its cross-section and the load duration. That is why the average moisture content in the cross-section is the key factor for classification in a service class.

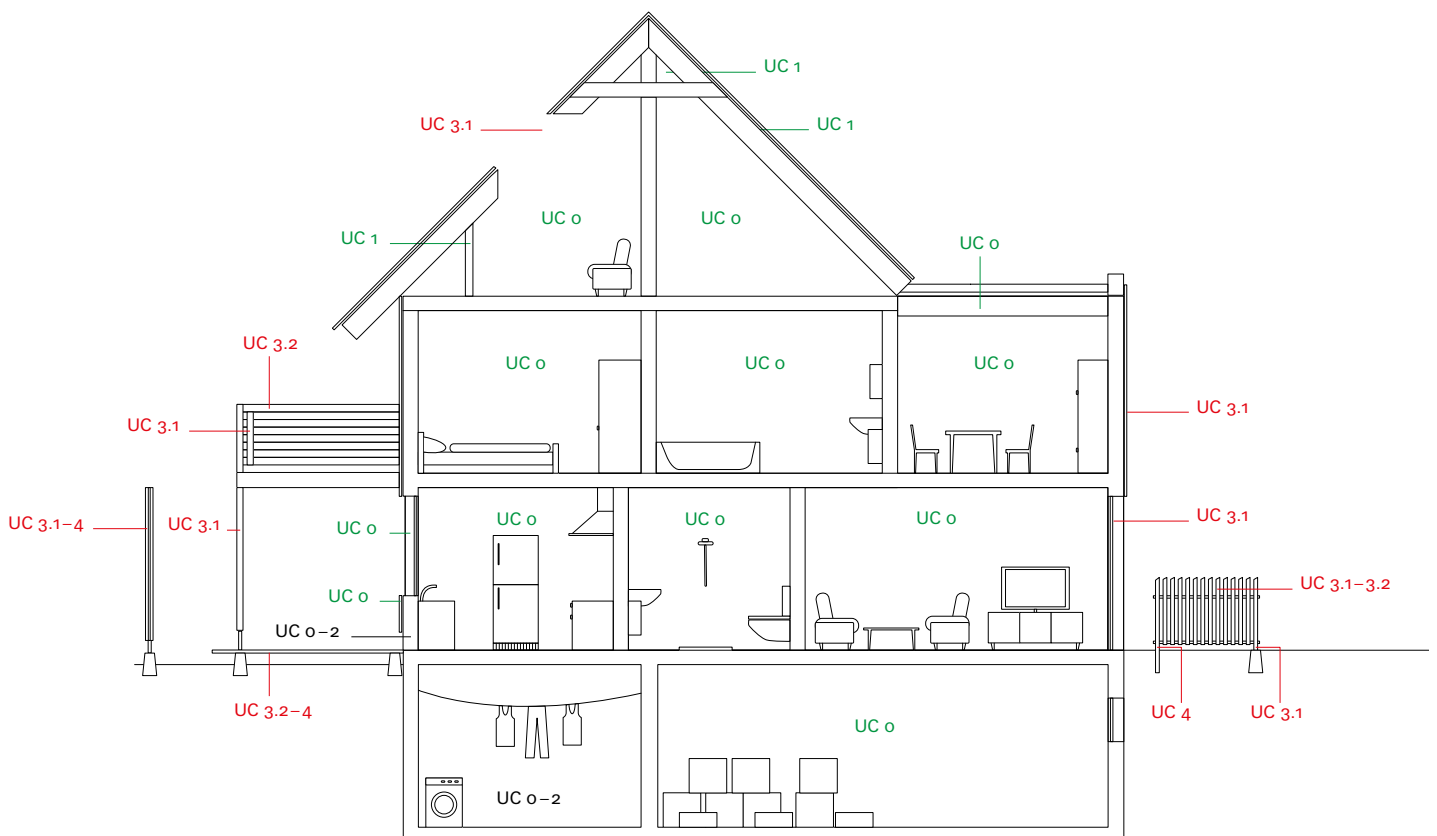
For the protection of the wood and the classification of an individual construction component in a particular use class, the local moisture content and/or surface exposure to moisture are the relevant parameters.

It is therefore not possible to align use classes according to DIN EN 1995-1-1 with service classes according to DIN 68800-1.

According to DIN 68800-1, BauBuche is a kiln-dried timber product.

Damage from insects is therefore highly unlikely. The risk of destruction by fungi (rot) can be eliminated by taking suitable "preventive constructional measures in buildings" as outlined in DIN-68800-2. These measures are constructive in nature and aim at a classification of the timber in use classes 0 or 1. When using BauBuche in use classes 0 and 1, there is thus no need for chemical wood preservation against rot. Using BauBuche in use class 2 is not recommended, and the material is not permitted in use classes 3–5.

Sample building, showing classification of timber construction elements in use classes according to DIN 68800-1, Annex D



BauBuche

UC 0–1 recommended

UC 0–2 permitted

UC 3–5 not permitted

APPENDIX A – manufacturer

Koch und Schulte GmbH & Co.KG

Products for protection during transport and installation, UV protection

	Properties/ notes	Available containers	Use per coat
Lignopro 878 BauBuche Primer	Biocide-free, low-viscosity acrylate-based primer with high solids content. Provides a uniform base coat for the application of BauBuche varnish products. Colourless, standard WL hues	20l 1000l	approx. 80g/m ²
Lignopro 879 BauBuche Primer Plus	Slightly hydrophobic, low-viscosity acrylate-based primer with high solids content. Provides a uniform base coat for the application of BauBuche varnish products. Ideal for components with slots or boreholes. Colourless, standard WL hues	20l 1000l	approx. 80g/m ²
Lignopro 880 BauBuche Varnish	Biocide-free special varnish for a hydrophobic BauBuche finish. Does not create a diffusion barrier. Colourless, standard WL hues	20l 1000l	approx. 120g/m ²
Lignopro 881 BauBuche Varnish UV	Biocide-free special varnish for a hydrophobic BauBuche finish and extra UV protection. Does not create a diffusion barrier. Colourless, standard WL hues	20l 1000l	approx. 120g/m ²
Lignopro 882 BauBuche Varnish Hydrox	Biocide-free special varnish for an highly hydrophobic BauBuche finish. Does not create a diffusion barrier. After drying, cannot be painted over without mechanical preparation. Colourless, standard WL hues	20l 1000l	approx. 120g/m ²
Lignopro 883 BauBuche Varnish Hydrox UV	Biocide-free special varnish for a highly hydrophobic BauBuche finish and extra UV protection. Does not create a diffusion barrier. After drying, cannot be painted over without mechanical preparation. Colourless, standard WL hues	20l 1000l	approx. 120g/m ²

System 1: Temporary protection against moisture during transport and installation (minor weathering up to 4 weeks). Lasting UV protection (after application of BauBuche Varnish UV) for use class (GK) 0–1.

- Priming with BauBuche Primer
 - Drying time 1–2 hours
 - Application of BauBuche Varnish or BauBuche Varnish UV
 - 2–3 extra coats of BauBuche Varnish or BauBuche Varnish UV on end-grain faces
 - Alternatively: No priming, application of 2 coats of BauBuche Varnish.
- Total consumption for 2 coats: approx. 0.20l/m²

System 2: Temporary protection against moisture during transport and installation (normal weathering up to 12 weeks). Lasting UV protection (after application of BauBuche Varnish Hydrox UV) for use class (GK) 0-1.

- Priming with BauBuche Primer
- Drying time 1-2 hours
- Application of BauBuche Varnish Hydrox or BauBuche Varnish Hydrox UV
- 2-3 extra coats of BauBuche Varnish Hydrox or BauBuche Varnish Hydrox UV on end-grain faces, **wet-on-wet** application

For more information on the application and safety of the products, refer to the technical documents published by the manufacturer (www.kochundschulze.de).