

PRODUCT SPECIFICATION

ENGINEERED VENEER



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BASIC INFORMATION

What is Engineered Veneer?

Engineered veneer is a type of natural wood veneer that undergoes advanced technological processing to achieve a consistent grain pattern, color, and texture. Unlike synthetic veneers made from plastic materials, engineered veneer retains the natural structure and characteristics of real wood while providing exceptional visual consistency.

Manufacturing Process

Logs from fast-growing tree species are debarked and sliced into veneer sheets of the required dimensions and thicknesses. The veneer is then bleached and dyed to enhance and optimize the natural color of the wood before being dried using professional drying equipment.

The veneer sheets are pressed into blocks using specialized molds and equipment. These blocks are then sliced at different angles to create the desired grain patterns.

Finally, the veneer is sorted and packaged according to color, texture, and product type. Engineered veneer is intended for decorative applications.

Typical Composition

- Samba wood, Poplar wood and/or Linden (Basswood) – 70–80%
- Resins – 16–26%
- Colorants – <1%
- Moisture content – 4–14%

As a natural wood product, the moisture content of engineered veneer may vary depending on transportation and storage conditions.

Technical Data

Supplied dimensions are specified according to commercial agreements.

Dimensional Tolerances

- Length: 2500-2800 mm
- Width: 64 mm
- Density: 450–900 kg/m³

Light Resistance

Engineered veneer is a semi-finished product; therefore, its resistance to light depends on the finishing process and the chemical properties of the coating system used.

The purchaser should be aware that some discoloration may occur over time.

It is recommended that the purchaser carries out preliminary testing to verify suitability for the intended application and to optimize finishing performance.

Mechanical Properties

The mechanical performance of engineered veneer depends on the finishing process, the chemical characteristics of the coating system, and the substrate used.

Preliminary testing is recommended to ensure optimum performance for the intended application.

Color and Grain

As a natural wood product, engineered veneer may vary slightly from the reference sample.

Before production, the purchaser should verify that the supplied veneer matches the ordered product in both color and grain pattern.

Due to natural variations in wood fiber absorption and differences between logs of the same species, color and grain variations of up to 10% may occur between production batches.

Storage

Since engineered veneer is primarily composed of natural wood, its moisture content may change depending on storage and working conditions.

Recommended storage conditions:

- Relative humidity: 45–65% RH
- Ambient temperature: 15–25°C

Avoid contact with water or other liquids, even temporarily. Do not allow moisture to remain on the veneer surface.

RECOMMENDATIONS FOR USE

Veneer Adhesives and Application

Bonding with Urea Adhesives

Engineered veneer can be bonded to all wood-based substrates using urea-based adhesives.

Each substrate should be tested individually before production.

The required adhesive application depends on:

- substrate type
- veneer thickness
- veneer cut (quarter cut, flat cut, burl, etc.)
- veneer surface structure
- embossing type

General recommendations:

- Adhesive application: up to 150 g/m²
- Pressing pressure: 1.5–5 bar
- Pressing temperature: 85–120°C

The adhesive may be modified with organic or inorganic additives to reduce adhesive bleed-through.

Pigments similar to the base color of the veneer should always be used.

For linden (basswood)-based veneers, urea adhesive should be applied at 120–140 g/m².

Adding up to 20% PVAc adhesive can improve the bonding performance of the resin.

Bonding with Vinyl (PVAc) Adhesives

Engineered veneer can be bonded to all wooden substrates using vinyl (PVAc) adhesives.

Each substrate should be individually tested.

Due to the thermoplastic properties of this type of adhesive, the application rate must be carefully controlled according to the veneering method and substrate to prevent surface irregularities that may become visible after sanding.

Recommended parameters:

- Adhesive application: 80–100 g/m²
- Pressing pressure: 1.5–3.5 bar
- Pressing temperature: 60–90°C

Bonding with Hot-Melt Adhesives

Engineered veneer can also be bonded to wood-based substrates using hot-melt adhesives such as:

- Polyolefin (PO)
- EVA
- Reactive Polyurethane (PUR)

These adhesives are primarily intended for bonding smaller areas, such as edges, using automated edge-banding systems with mechanical pressure.

Alternative veneering systems should always be tested before production.

In all cases, the adhesive manufacturer's technical recommendations should be followed.

Sanding

After veneering, the surface should be sanded to remove adhesive residues.

The recommended sanding sequence is: 120 → 150 → 180 grit using either manual or automatic sanding equipment.

Grits 100 or 220–240 should only be used when special decorative effects are required.

Cross-grain sanding with 120–150–180 grit abrasives should be carried out using light pressure.

Excessive pressure may cause micro-cutting marks or surface fiber tearing, particularly on linden (basswood)-based veneers.

Finishing

Like all natural wood products, engineered veneer should be finished using coating systems that provide maximum protection against:

- Chemical degradation
- Physical degradation (including UV exposure and thermal ageing)
- Mechanical damage (such as scratches and abrasion)

Engineered veneer can be stained without difficulty, and staining is both acceptable and recommended.

It can be finished using any coating system suitable for wood. However, the best results are achieved with products offering:

- Excellent wetting properties
- High resistance to yellowing
- Superior UV resistance

For water-based coating systems, products with a moderately acidic pH (4–6) are recommended, particularly those developed for acidic hardwood species.

It is always recommended to follow the coating manufacturer's technical instructions and to perform preliminary tests before starting production.