The Biofore Company

UPM Grada® 2000

UPM Grada is a wood material, which can be formed with heat and pressure. The new Grada technology developed by UPM shortens the form pressing process and increases its efficiency. The UPM Grada thermo-formable wood panel is formed into a component easily in two steps – first the panel is heated and then formed and cooled in a mould.

Efficiency Made Easy.

Advantages of UPM Grada 2000

Thanks to the latest Grada technology development, UPM Grada 2000, enables a more efficient forming process of wood material than before. The thermo-formable wood panel can be formed in 95°C, which enables faster heating of the material. Make your form pressing process more efficient and save energy at the same time.

- The forming is easy and efficient in two steps – first the panel is heated and then formed and cooled in a mould.
- The material is manufactured using FSC® or PEFC™ certified wood and following the best practices for sustainable and responsible forestry.
- The adhesive used in the panel, does not contain any formaldehyde or other harmful compounds.

Product Properties

Panel

The UPM Grada 2000 panel is made of cross-laminated rotary cut birch veneers. Birch is known for its high strength and stability.

Quality

Veneer sheets are bonded with moisture resistant bonding (EN 314-2). The standard face veneer quality complies with EN 635, S (II)/BB (III) classification.

Panel Options

- EasyTop panel's hot melt gluelines on top of panel surfaces enable coating without additional adhesive.
- UnderCover panel is a low cost panel with non-classified veneer surfaces.

Environment, Health & Safety

The adhesive foil of UPM Grada 2000 does not contain any formaldehyde. UPM Grada 2000 fulfills the EN 13986 E1 and the CARB No Added Formaldehyde emission classes. At the end of its lifecycle the material can be safely recycled or burned.

Surfacing

Multiple surface materials e.g. laminate, veneer or textiles can be bonded onto the EasyTop panel without additional adhesive.

PEFC PEFC/02-31-112 Promoting Sustainable Forest Management www.pefc.org

FSC www.fsc.org FSC® C009856 The mark of responsible forestry

MANAGEMENT SYSTEM CERTIFICATION DNV·GL ISO 9001 = ISO 14001

CE

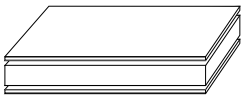
Thicknesses and weights

Nominal thickness (mm)	Thickness (mm) Min	Max	Weight (kg/m²) abt
4.5	3.4	4.2	2.6
7	6.3	7.3	4.5
10	9.2	10.2	6.5
13	12.1	13.1	8.5

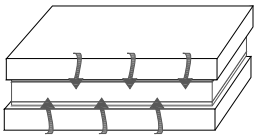
Forming Principles

Once the UPM Grada panel is heated to 95°C, the adhesive between the veneers melts so that the panel can be formed into different shapes. The melted adhesive allows the veneers to slide which enables forming. The hot panel is formed in a mould and cooled to 70°C simultaneously.

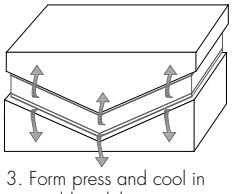
UPM Grada material is optimal for two dimensional shapes. If required, the form presser selects and applies a suitable surface material for the end product e.g. laminate or veneer. The surface material can be laid-up on the panel before heating and forming.



1. Select and lay-up surface, if needed

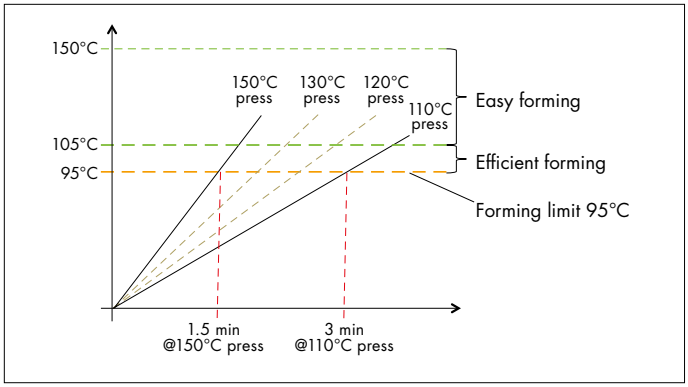


2. Heat and press the panel so that 95°C temperature is reached inside the panel. (The heating press temperature is typically 110–150°C)



3. Form press and cool in mould until the component temperature is less than 70°C.

Indicative heating times for 10mm thick panel



Dimensions

Standard panel sizes: 1250 x 2500 mm, 1500 x 3000 mm
Cut to sizes based on mutual agreement.

Size tolerances: < 1000 mm ±1 mm
1000–2000 mm ± 2 mm
> 2000 mm ± 3 mm

Storage

Wood is a living material and subject to moisture movements depending on surrounding conditions. The moisture movement may affect flatness and dimensional stability of the panels. To prevent moisture penetrating the panels during transportation and storage, panels are packed and stored in sealed plastic. The panels should remain stored unopened in packaging until used in production. Indoor storage at a maximum temperature of 30°C and maximum humidity of 60RH is required.

For more information please visit www.upmgrada.com

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