

BANOVA®

BRANDNEW!

BANOVA® PLUS BANOVA® SUPERFLEX BANOVA® DIGITAL

BANOVA® PLUS

HIGHER PERFORMANCE AT THE SAME WEIGHT

BANOVA® PLUS with a core made of balsa and high end natural wood surfaces. The panel is refined with a regionally available light hardwood, which provides thin but more resistant high end surfaces. The new product is easy to process and brings high value to the manufacturing chain as well as in the final application.

BANOVA® PLUS – AT A GLANCE

- High scratch and impact resistance
- Homogenous and smooth sanding quality
- Higher panel stiffness at the same panel weight due to the sandwich effect
- High form stability thanks to the symmetrical layup and the use of a cold curing polyurethane based adhesive
- Seamless full veneer surfaces
- High end surface for lamination with foil, CPL, wallpaper, direct varnishing or painting
- Natural wood from responsible sources – FSC® Mix (FSC-C127318)
- Dimensions: Thicknesses: 12 / 15 / 18 / 25 / 30 / 40 / 50 mm
Formats: 1220 x 2440 mm / 1220 x 3050 mm

BANOVA® SUPERFLEX

MORE FLEXIBLE BENDING AND SHAPING

Thanks to its new textile middle layer BANOVA® SUPERFLEX is extremely flexible and shows only a very little memory effect of the surfaces. Form components made with this flexible core are very light, stiff and stay stable in form. Shapes with radii up to 40 mm can be manufactured with best surface quality.

BANOVA® SUPERFLEX – AT A GLANCE

- Versatile applications and processing possibilities due to high flexibility
- Easy manufacturing and handling without special tools or machines
- Great surface quality on both sides when s-shaped
- Outstanding surface quality when bonded in a membrane press
- Organic smooth shaped surface – no segmentation compared to other materials
- Solid core material makes a spotless surface possible
- Wood from responsible sources – FSC® certified (FSC-C127318)
- Dimensions: Thickness: 8 mm
Formats: 1220 x 2440 mm / 2440 x 1220 mm / 3050 x 1220 mm





BANOVA® PLUS - Lightweight and high performance

BANOVA® PLUS is the world's lightest plywood with a core made of balsa from 100% FSC®-certified plantations (FSC-C019065). Its weight reduction of 50-70% in comparison to conventional wood panels is impressive, as is the high thermal insulation and lamination abilities. The panel is refined with a regionally available light hardwood, which provides thin but more resistant high-end surfaces. The new product is easy to process and brings high value to the manufacturing chain as well as in the final application.



The mark of responsible forestry

Look for FSC®-certified products.

Applications

Anything is possible.

BANOVA® PLUS fulfills the needs of various markets:

- Furniture and interior fittings
- Interiors for vehicles, yachts, and boats
- Exhibition and shop fitting

BANOVA® PLUS can be produced to fulfill various properties, and thus its application is nearly unlimited:

- Mobile furniture
- Feather-light table tops and doors
- Decorative front panels and covers
- Semi-structural components

...nearly anything is possible

> Motorhome FRANKIA Selection T72 FD-L with BANOVA®

Properties

- High scratch and impact resistance
- Homogenous and smooth sanding quality
- Higher panel stiffness at the same panel weight due to the sandwich effect
- High form stability thanks to the symmetrical layup and the use of a cold curing polyurethane based adhesive
- Seamless full veneer surfaces
- High end surface for lamination with foil, CPL, wallpaper, direct varnishing or painting
- BANOVA® PLUS is offered as FSC®-Mix product
- Dimensions: Thicknesses: 12 / 15 / 18 / 25 / 30 / 40 / 50 mm
- Formats: 1220 x 2440 mm / 1220 x 3050 mm

Processing

Easy processing

BANOVA® PLUS is a solid wood material; processing does not require special machines or tools as it may be the case with other lightweight composite panels. Even conventional joining techniques can easily be used.

Advantages:

- No investment for new specific tools and equipment
- Existing know-how and existing work procedures can be used
- Up to 30% faster processing (e.g. laser cutting or milling)
- Unbeatable bonding qualities on edges and surfaces

Processing at a glance

BANOVA® PLY and BANOVA® FLEX are wood based panels with very low density and are thus ideal for simple, efficient processing.

Joining



Joining individual components into something bigger? Everything stays the same – just faster and easier. BANOVA® is therefore ideal for all joining methods commonly used in wood processing:

Adhesion

Bonding is one of the most efficient joining techniques that is perfectly suited for joints between BANOVA® and other materials. Common wood adhesives can easily be used.

Lamello and tongue-and-groove joinery

Lamello is a simple positioning aid for gluing and offers the following advantages: precise milling (CNC or power tool), large adhesive surface for stronger bonding, clean processing and simple pressing.

Dowels

Positioning and joining with wooden dowels is a proven, durable, standard wood joining technique that works well with BANOVA®. Durable cabinet joints can be manufactured in the common production process of the furniture industry.

Screws

Connecting fast and efficient work with usual wood screws. BANOVA® allows to fasten without pre-drilling or counter-sinking. There is no risk of splitting and the solid light panel core provides an excellent guidance to the screw.

Hinges and fittings

Concealed hinges for and hardware for fast assembly can be applied in the common way. For high extraction forces and dynamic loads a small defined amount of mounting adhesive into the predrilled hole ensures the durable joint. The mounting glue can penetrate deeply into the wood structure and anchor fasteners and inserts in the solid panel core.

Fast fittings

Commonly used fittings for fast assembly are perfectly suited. Pre-installation takes place in the plant, the components are simply clicked together at the final destination.

Forming



BANOVA® is flexible – literally. The porous structure of balsa wood allows an easy modelling of curves:

Bending

With BANOVA® FLEX it is possible to form curves with radii of merely 80mm; to both sides (s shape) by using only one thick panel core layer.

Form-gluing

BANOVA® FLEX was developed specifically for form-gluing. The easiest manufacturing option is a vacuum bag without counterpiece to apply a uniform surface pressure to the full press surface.

Finishing



Adding cover layers optimizes properties like panel stiffness, rigidity, impact resistance, scratch resistance, texture, color and printability pursuant to customer needs:

Coating

Finishing cover layers made of solid wood veneers, MDF/HDF, HPL/CPL, aluminum, paper and synthetic foils gives BANOVA® the desired properties.

Printing

BANOVA® can be coated with extremely thin paper and thus becomes a very even material on which any desired subject can be printed. By the way: BANOVA® is also used for direct printing without a cover layer.

Processing



BANOVA® is wood! As a solid wood material, BANOVA® can be processed like a regular lightweight wood by using common machines with conventional tools:

Sawing

Due to the low density of BANOVA® it is possible to achieve a processing speed that is up to 30% higher. Existing saws, laser cutters and CNC routers can be used. Only the clamping forces in manufacturing processes must be reduced.

Drilling and milling

Well sharpened drilling and milling tools shall be run at a high cutting speed in order to achieve precise results.

Sanding

Standard wood abrasives are well suited for high quality surfaces. An efficient dust extraction system is evident to prevent any quality compromises in further production steps.

Transport & Handling



Volume and weight limits of trucks and containers can be fully utilized due to the low weight of BANOVA®. Single panels can easily be carried by only one person.

Packaging

BANOVA® is supplied on pallets with protective cover panels on the top and the bottom. A synthetic foil protects the hygroscopic material from temporary exposure to increased humidity.

Handling

The quality of BANOVA® panels may be compromised by improper handling. If key processing and storage guidelines are followed, perfect results can be expected – without exception.

Safety Data Sheet for BANOVA[®], BALTEK[®] VBC

According to Regulation (EC) No. 1907/2006

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revised: April 20th, 2017
GM--SDS-017

7. Handling and storage	
<i>Handling:</i>	No special measures required. Avoid generation or accumulation of dust. Take precautionary measures against static discharges. Ground all equipment.
<i>Storage:</i>	Store away from immediate and dangerous sources of ignition. Storage at a dry place is recommended.
8. Exposure control / personal protection	
<i>Exposure limit values (for particles):</i>	Not otherwise regulated: PEL TWA = 15 mg/m ³ . Fiberglass dust (CAS #65997-17-3) for bending plywood: PEL TWA=10 mg/m ³ , TWA=5 mg/m ³ for respiration
<i>Exposure controls:</i>	The use of gloves, protective goggles and dust masks (such as TC-21C-132 approved) is recommended for sawing, milling, grinding and sanding. Where use results in generation of dust from product, provide sufficient mechanical (general and/or local exhaust) ventilation or vacuum-assisted dust collection to prevent explosive concentrations of airborne dust from developing.
9. Physical and chemical properties	
<i>Physical state / form:</i>	Wood, integral, solid
<i>Colour:</i>	Natural wood color (light to dark brown)
<i>Melting temperature:</i>	Material does not melt
<i>Decomposition temperature</i>	Greater than 232 °C (450 °F)
<i>Flash ignition temperature</i>	Greater than 200 °C (400 °F)
<i>Density:</i>	150 - 300 kg/m ³ (ISO 845)
<i>Solubility:</i>	
<i>Insoluble in:</i>	Water (<1%), salt water (<1%), organic compounds.
<i>Soluble in:</i>	Strong acids and alkalis.
10. Stability and reactivity	
<i>General information:</i>	Stable under normal conditions and usage.
<i>Conditions to avoid:</i>	Temperatures above 200 °C (400 °F).
<i>Explosive limits in air:</i>	For wood dust clouds, 40 g/m ³ (lower explosive limit).
<i>Materials to avoid:</i>	Strong oxidizing agents can cause ignition and subsequent burning. Avoid exposure to open flame or excessive heat.
<i>Dangerous decomposition products:</i>	Carbon monoxide (CO), carbon dioxide (CO ₂), traces of low molecular weight hydrocarbons and organic acids.
11. Toxicological information	
<i>Toxicological tests:</i>	Natural product, not performed.
<i>Skin contact:</i>	Wood dust, depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and/or irritation. The International Agency for Research on Cancer (IARC) classifies wood dust as a carcinogen to humans (Group 1, as of April 1995). This classification is based primarily on IARC's evaluation of the nasal cavities and paranasal sinuses associated with exposure to wood dust. IARC did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hemopoietic systems, stomach, colon or rectum with exposure to wood dust. The American Conference of Governmental Industrial Hygienists (ACGIH) classifies hardwood dust as a confirmed human carcinogen (Class A1, as of May 1996).
<i>Eye contact:</i>	Dust may cause irritation.
<i>Inhalation:</i>	Dust may cause irritation of respiration tract.
<i>Ingestion:</i>	Low toxicity, LD50 > 2000 mg/kg

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12. Ecological information

Ecotoxicity: Natural product, unlikely toxic.
Mobility: Not soluble in water, therefore effects on groundwater are unlikely.
Persistence and degradability: Natural wood product, biodegradable by fungi and bacteria.

13. Disposal considerations

Subject to legislation by local authorities, the product can be disposed together with domestic refuse and industrial waste. Waste and residues can be incinerated in a plant equipped with flue gas washing, together with domestic waste.

14. Transport information

Railroad	RID	No restriction.
Road	ADR	No restriction.
Sea	IMDG Code	No restriction.
Air	ICAO-TI/IATA-DGR	No restriction.
UN-Classification		Not required.

15. Regulatory information

BANOVA[®] lightweight panel / bending plywood and BALTEK[®] VBC do not require marking under the dangerous substances and preparation directives 67/548/EEG and 1999/45/EEG.

WHMIS (Canada): Not a controlled product. TDG (Canada): No label required.

16. Other information

This issue of the safety data sheet replaces the issue released on January 9th, 2017. The information given in this material safety data sheet is accurate to the best of our knowledge, but without any guarantee. It is given in good faith based on the current state of knowledge and experience. It is issued in respect of safety requirements and does not purpose to provide information on the quality of the material.



1.1 Commitment by the management

Innovaciones en Balsa Banova S.A. is committed to procuring products and services that ensure that materials are sourced from legal and well-managed forests that have been certified to credible certification standards. As a cornerstone of that commitment we will pursue a Responsible Sourcing Program to promote the use and marketing of legal and environmentally responsible forest products.

1.2 Continuous improvement

We hereby commits to a commitment to continuously improve the sustainability level of our sourcing by favouring stricter and more credible certification and verification standards and sourcing requirements and by avoiding sourcing from unknown or unsustainable sources.

1.3 Certification

Where possible we are committed to procuring wood products that have been certified against an internationally recognized standard for good forest management to ensure that the material originates from a well managed forest.

1.4 Legality

We are committed to sourcing only material that is produced processed and traded according to applicable legislation.

1.5 Social responsibility

We are committed to avoid engaging in or benefitting from controversial business practices, such as, but not limited to:

- Any form of forced labor, including bonded labor, forced prison labor, slavery, servitude, or human trafficking.
- The use of child labor. The minimum age for employment shall not be less than the age of completion of compulsory schooling and, in any case, shall not be less than 15 years.
- Discrimination on the basis of race, color, sex, language, religion, political or other opinion, caste, national or social origin, property, birth, union affiliation, sexual orientation, health status, family responsibilities, age, and disability or other distinguishing characteristics.
- Organization offers its workers a safe and healthy working environment, including, but not limited to, protection from fire, noise, accidents and toxic substances. Adequate health and safety policies and procedures are established and followed.

If we become aware that any of these issues are relevant in our organization or any of our suppliers we are committed to take relevant steps to mitigate any such situation.

1.6 Environmental responsibility

We are committed to promoting responsible stewardship toward the environment and its natural resources. We are committed to lessen the impact on the environment caused by our own activities or those activities carried out by our suppliers and sub-suppliers.

1.7 Supply chain management and information



We will ensure that information about suppliers and sources of material are evaluated and necessary information is collected in order to enable effective risk assessment.

1.8 Risk assessment and mitigation

We will carry out risk assessment of all suppliers and supplies of wood in order to evaluate the risk that the material or products being sourced originates from an illegal source or has been illegally traded. In case risks are identified and cannot be classified as negligible we will carry out appropriate risk mitigating actions in order to avoid any potential risk.

1.9 Monitoring and verification

The company will carry out applicable monitoring of internal systems and procedures. Access will also be made for external audits, as necessary and applicable, in order to allow verification that the relevant systems are in place and being implemented according to the requirements of these.

1.10 Review and adaptation of policy

We will ensure that this policy, and related documents, are periodically reviewed and appropriately revised.

1.11 Communications and stakeholders

This Policy shall be available publicly and will be communicated to suppliers and interested parties.

Ramón del Pino Vivanco
Gerente General

Guayaquil, 23 de noviembre de 2015