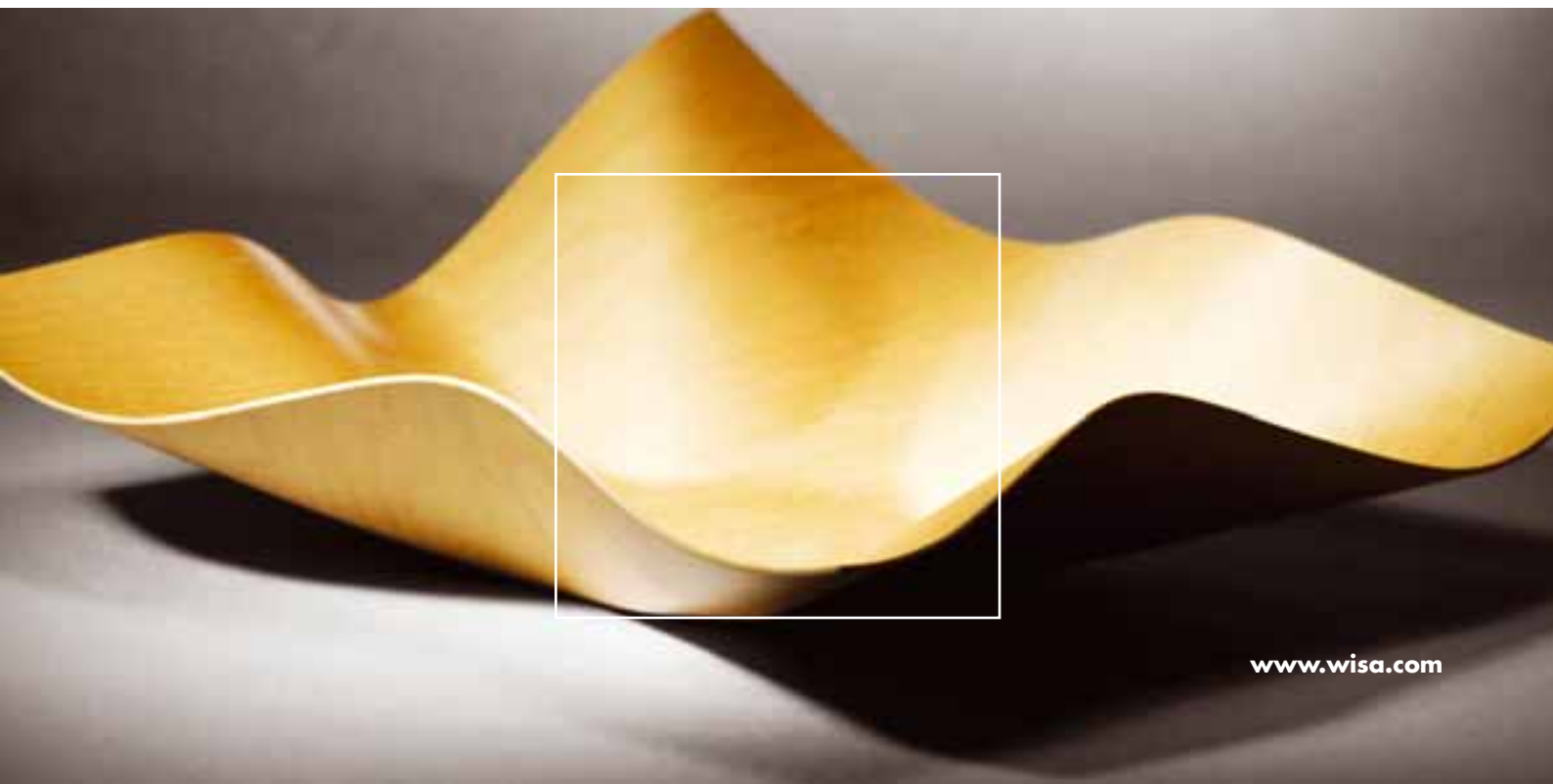




WISA®-Craft Plywood.
A material to challenge the mind.



www.wisa.com



A material to challenge the mind

Craft plywood takes shape in the hands and mind of the designer. The product is an exquisite material ready to be used.

The material requires delicate workmanship, ideally combined with simple, uncluttered designs. This reveals the natural beauty of the birch, particularly when light falls on the surface.

When used in ultra thin panels, WISA-Craft plywood's valuable property of uniquely high strength to weight and thickness can be utilised.

In many instances, craft plywood can replace textile or paper. It can also be used in conjunction with just about any known material. UPM manufactures aircraft plywood as well as other types of strong, thin plywood suitable for demanding end uses.



Jouko Kärkkäinen is a Finnish industrial designer.

The material as inspiration: Ply Wall Element

In a cooperation project between the Centre of Expertise for Wood Products, the University of Art and Design in Helsinki, and UPM, the idea was to find new uses and ways of working with WISA-Craft Plywood that could be utilised in a new, ISA interior decoration product.

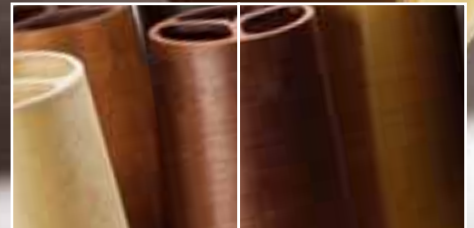
By testing and trying several different models, the strengths and possibilities of the material were found. Whenever a problem was encountered, it was solved with further testing in the workshop.

Early in the development it was realized that the way the material was intended to be worked had never been done before. Therefore the patenting process for the Ply Wall Element was started in the early stages of planning. The first models produced were done in cooperation with skilled carpenters, nowadays they are done in a furniture factory.

The Ply Wall Elements work well in public spaces, such as vestibules, auditoria, conference rooms, offices and restaurants etc. On a smaller scale it can be used in hotel rooms and private homes. At the moment new applications are being developed that can be used as acoustic elements, partition walls, and in light fixtures.



IVANA Helsinki is a Finnish design company specializing in clothes, accessories and home interior items. As their production is based on strict ethical and ecological principles, they are now exploring possibilities with offset printed plywood.



From aircrafts to business cards and toys to lampshades...

You can use craft plywood in any home or public space where an additional touch of style is needed.

Excellent technical qualities make craft plywood an ideal material for highly impressive and long-lasting end uses. In most applications the surface is best left in its natural state, it is rarely painted on.

Birch has a special quality of its own being outstandingly dense and tight grained. Among other uses, it is well suited for the packaging of food products, as it doesn't pass any odours or flavours to the product.

WISA-Craft is used by the best instrument builders in the world because of its excellent acoustic qualities, its strength, and light weight.



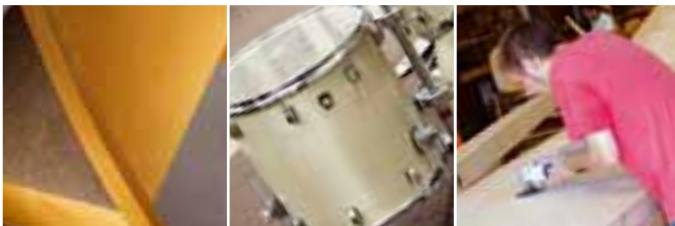
Case: APEX-Aircraft, France

Due to its extreme strength, WISA-Craft can be used as wing material for aircrafts designed for aerial acrobatics.

Also, being a very light material, it benefits aerial acrobatics, because the engines can be smaller and less fuel is needed for the plane to fly.

These planes are often used in pilot training and are therefore more likely to be damaged e.g. wings are bumped when they are driven into the hangars.

With wings made from WISA-Craft plywood (covered with cloth), the impact doesn't damage the whole structure. Therefore, using WISA-Craft is both practical and cost effective in this application.





A material with a soul

The true test for a designer using craft plywood is to understand the essence of the material and utilise this in the end product. The importance of a surface should not be underestimated, people want to touch things, feel them, and appreciate the characteristics of the texture.

WISA-Craft plywood not only meets this particular challenge, but using it allows extremely strong and thin constructions to be produced that endure from generation to generation, remaining as beautiful as ever.

Material diversity

The various uses of craft plywood are based on a wide spectrum of possibilities rising from the excellent qualities of the material: its lightness, beauty, the fact that it is pleasant to touch, extreme strength, several environmental aspects, recycling matters, flexibility, transparency, and ease of working.



Craft plywood, R&D and lamps

From the designer's point of view, product development is essential. In lamps, the light itself is merciless; it reveals all flaws in the material. At the same time, one of the best qualities of craft plywood is the warm glow that appears when light passes through. Only after recent product development breakthroughs it has been possible to produce lamps using plywood.

Consumers, the press, audiences at fairs and designer stores all around the world are constantly interested in these products. As the material itself becomes more available, and several different sizes and grades are produced, craft plywood can be used to make individual and previously unseen products for demanding international market.

Craft plywood is strong, light and its qualities can be developed in previously unimaginable ways. The traditional and symbolical values of wood come to life using modern manufacturing techniques. As a material it has a rich history. For a designer, what can be more captivating than to explore new uses for such a material?

The vast spectrum of WISA-Craft plywood

WISA-Craft is a birch plywood made from ultra thin veneers. It comes in a variety of grades, designed and manufactured for various purposes.

Thin veneer plywood possesses many quality features including lightness, hardness, good bending properties and workability as well as an attractive surface and suitability for food packaging.

WISA-Craft GL I
WISA-Craft GL II

WISA-Craft Quality I /
furniture quality

WISA-Craft Quality II
WISA-Craft Quality III

WISA-Craft Customer
qualities



WISA-Craft GL I

Classified thin veneer plywood, so-called aircraft plywood for technically challenging end uses. Marked sheets are available only in pressed sizes.

WISA-Craft GL II

Classified thin veneer plywood for demanding use, in which the surface remains visible: musical instruments, light fixtures, boats, scale models, furniture, ornaments and so on.

Thickness	Length x width
0,6 - 12 mm	1550 x 1550 mm
	1525 x 1525 mm
	1500 x 1500 mm
	1270 x 1270 mm
	1220 x 1220 mm

Thickness	Length x width
0,6 - 12 mm	1550 x 1550 mm
	1525 x 1525 mm
	1500 x 1500 mm
	1270 x 1270 mm
	1220 x 1220 mm

Quality class GL I

1550 x 1550 mm and 1270 x 1270 mm.
Number of plies according to Germanischer Lloyd standard.
Phenolic resin glue.
Free from all technical defects.
Permitted are defects closer than 30 mm to the edge of the veneer and one set of sound knots not up to 6 mm.
Classification: Germanischer Lloyd or Bureau Veritas.

Quality class GL II

Number of plies according to Germanischer Lloyd standard.
Phenolic resin glue.
A rectangular piece of the half board size shall comply with the requirements of GL I and of the quality GL I, as shall 2/3 of the entire area.
Knots permitted: max. 10 mm open in two rows.
Minimum distance between faults 200 mm. Defective joints, splits and overlaps are permitted if they comply with the above-mentioned location and distance requirements.



WISA-Craft Quality I / furniture quality

Free from technical and colour defects. Straight and even grain. Furniture, wall panels, doors, interior ceiling, decoratively demanding interior elements.

Thickness	Length x width
0,4 - 1,2 mm	1550 x 1550 mm 1525 x 1525 mm 1500 x 1500 mm 1270 x 1270 mm 1220 x 1220 mm
1,5 – 12,0 mm	1550 x 1550 mm 1525 x 1525 mm 1500 x 1500 mm 1270 x 1270 mm 1220 x 1220 mm
1,5 – 2,5 mm	1550 x 2440 mm 2440 x 1550 mm 1550 x 2100 mm 2100 x 1550 mm spliced surfaces

Other thicknesses available upon request.
Face and back veneers seamed when needed.

Quality class I

Phenolic resin glue (melamine resin glue optional).
Permitted faults: some buds, scars, slight curling and streaks.

WISA-Craft quality II

Thin veneer plywood for demanding use, in which the surface remains visible: musical instruments, light fixtures, boats, scale models, furniture, ornaments and so on.

Thickness	Length x width
0,4 - 1,2 mm	1550 x 1550 mm 1525 x 1525 mm 1500 x 1500 mm 1270 x 1270 mm 1220 x 1220 mm
1,5 – 12,0 mm	1550 x 1550 mm 1525 x 1525 mm 1500 x 1500 mm 1270 x 1270 mm 1220 x 1220 mm
1,5 – 2,5 mm	1550 x 2440 mm 2440 x 1550 mm 1550 x 2100 mm 2100 x 1550 mm spliced surfaces

Other thicknesses available upon request.
Face and back veneers seamed when needed.

Quality class GL II

Number of plies according to Germanischer Lloyd standard whenever needed.
Phenolic resin glue (Melamine resin glue optional).

Knots permitted: max. 10 mm open in two rows.
Minimum distance between faults 200 mm. Defective joints, splits and overlaps are permitted if they comply with the above-mentioned location and distance requirements.

WISA-Craft quality III

Factory quality classified thin veneer plywood, which is suitable for products such as toys, scale models, sports gear, gun stocks, decorations, business gifts and products that are pressed to shape and require extreme strength; saddles, casts, dashboards and other car interior products.

Thickness	Length x width
0,4 - 1,2 mm	1550 x 1550 mm 1525 x 1525 mm 1500 x 1500 mm 1270 x 1270 mm 1220 x 1220 mm
1,5 – 60 mm	1550 x 1550 mm 1525 x 1525 mm 1500 x 1500 mm 1270 x 1270 mm 1220 x 1220 mm
1,5 – 2,5 mm	1550 x 2440 mm 2440 x 1550 mm 1550 x 2100 mm 2100 x 1550 mm spliced surfaces

Other thicknesses available upon request.
Face and back veneers seamed when needed.

Quality class III

Number of plies according to Germanischer Lloyd standard.
Phenolic resin glue.

Knots permitted: max. 10 mm open and max. 15 mm sound live knots 8 pcs/m². Sound live knots max. 8 mm are permitted to any extent. Permitted in one face are defective joints, splits or overlaps up to the length of 200 mm and to the width of 1 mm. All the above defects must not be present in one and the same board.

WISA-Craft customer qualities

WISA-Craft thin veneer plywood can also be tailor made to customer requirements.

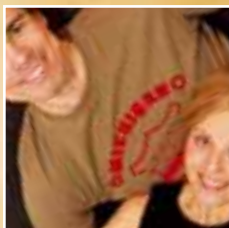
Thickness	Length x width
0,4 - 1,2 mm	1550 x 1550 mm 1525 x 1525 mm 1500 x 1500 mm 1270 x 1270 mm 1220 x 1220 mm
1,5 – 60 mm	1550 x 1550 mm 1525 x 1525 mm 1500 x 1500 mm 1270 x 1270 mm 1220 x 1220 mm
1,5 – 2,5 mm	1550 x 2440 mm 2440 x 1550 mm 1550 x 2100 mm 2100 x 1550 mm spliced surfaces

Other thicknesses available upon request. Face and back veneers seamed when needed. Customer-specific thicknesses and measurements also available.

Quality classes and structures are extremely customer-specific, and thin veneer plywood is used to make a wide variety of products; from furniture, light fixtures and other interior products all the way to smart- and postcards and products that are made using a lot of bending and twisting.

Phenolic resin glue (number of plies: 3-117) or melamine resin glue (number of plies: 2-117).

The most common quality is free from technical and colour faults. Straight and even grain.
Permitted faults: some buds, scars, slight curling and streaks.



Not only do we provide you with the latest technology, but we also continuously work to develop and improve it.

Our R&D department researches and develops existing solutions and produces new, even better ones. Our experts also produce different types of tailor-made studies on request.

In cooperation with our customers we continuously develop further processed raw materials so that you can benefit from the use of an even more finished product.

We have over a hundred years experience of working with birch, combined with specialized production units, trained personnel, and traditional craftsmanship using the most sophisticated production methods and advanced technology in the business.

WISA-Craft is manufactured according to the strictest quality requirements in plywood production. During testing, special attention is given to strength to provide craft plywood that is not only lightweight, but can be used in extreme conditions. We are proud to let you benefit from it.

Exact and prompt deliveries

At your service when you need it, JIT deliveries

The deliveries of plywood to our customers are flexible and quick, using experienced logistical knowhow and dependable partners.

Our sales offices and technical experts are locally at your service, all over the world, whatever questions or inquiries might arise.

Sustaining the environment that provides us

We follow the environmental policy of UPM. Environmental protection and continuous attention to environmental issues are an essential part of our daily work. Our sawmills and plywood mills in Finland have an ISO 14001 certified environmental management system.

The concept of continuous improvement is a key component of the environmental management system. Each unit draws up annual targets and action programmes, which determine their own operations with respect to environmental matters in accordance with their needs.

We respond with pleasure to questions about environmental matters received from customers and different interest group.

UPM policy is one of continuous development. We reserve the right to amend specifications without notice or obligation.





P.O.Box 7 (Kotkantie 1)
FIN-08101 LOHJA, Finland
Tel. +358 204 15 115
Fax +358 204 15 114
www.wisa.com
www.upm-kymmene.com