



Worldwide Wood Flooring Importers, Distributors & Agents

## THE 2022 ESSENTIAL BUYER'S GUIDE



# PLYWOOD AND SHEET MATERIALS

### INCLUDING

FG1™ Flooring Grade Plywood • Q-Mark Hardwood  
Mixed Light Hardwood • Birch Plywood



# KEEP CALM AND CARRY FG1<sup>TM</sup>

## THE BRAND WITH THE THICKEST VENEERS

### SUSTAINABILITY IS OUR PRIORITY

Wood is a versatile construction product and the wide range of species that are available are what make it a useful and valuable commodity, but trees are also one of the most important plants on our planet due to its ability to absorb carbon during its lifetime and the many species that use them as their homes. So, the sustainability of all forests is forefront to our business.

As a company, we are very concerned over the issues that surrounds timber — specifically that of illegal logging and the damage that this carries out on the biodiversity and the indigenous peoples in the areas in which it takes place.

For these reasons, we work closely with our suppliers all over the world to ensure we execute a robust due diligence system to remove the risk of our supply chain contributing to the world's deforestation. We have opted not to purchase wood products of certain species from certain area of the world as per the commendations of CITES flora and fauna red list.

(introduced in 2013), designed to prohibit the trade of illegally logged timber within the EU.

**All our panels bought and sold conform to EUTR.**

#### FOREST STEWARDSHIP COUNCIL (FSC)

Forest Stewardship Council (FSC) are recognized globally as the world leaders in forest management and sustainability. The FSC was created in 1994 by a group of businessmen, community leaders and environmentalists who were disgruntled at the lack of an agreement following the 1992 Rio Earth Summit.

By creating a voluntary, market-based approach they took away governments inactivity and put the emphasis on the businesses to be more aware of what they were doing and how it was affecting our planet. At Lionvest Trading, we recognise the critical importance of sustainability and are wholly committed to working in line with the FSC and its guidance.



#### UKTR (UK TIMBER REGULATIONS)

The European Timber Regulation (EUTR) and Forest Law Enforcement Governance and Trade (FLEGT) no longer apply in Great Britain (England, Scotland and Wales).

Timber and Timber Products Placing on the Market Regulations (UKTR) and UK FLEGT Regulations apply in Great Britain from 1 January 2021 but the requirements remain the same as under EUTR

#### A GREENER BUSINESS

Beyond this, we have also set ourselves in-house targets to save water, reduce our waste to landfill and also our carbon footprint.

We work with our hauliers to increase their fleets of low emission vehicles and have ourselves invested in electric cars for our sales reps and continue to work towards a paperless office and reducing our impact on the environment.

# PLYWOOD PANEL PRODUCTS

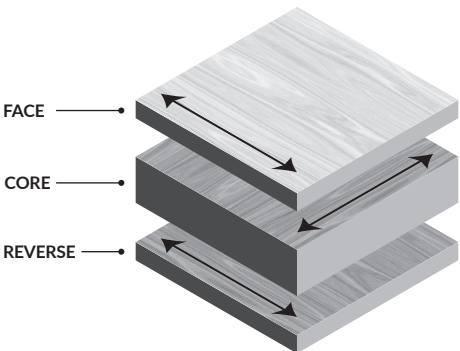
## WHAT IS PLYWOOD AND HOW IS IT MADE?

Plywood is a sheet material which is mainly used in construction and flooring, and consists of just two materials: wood and glue.

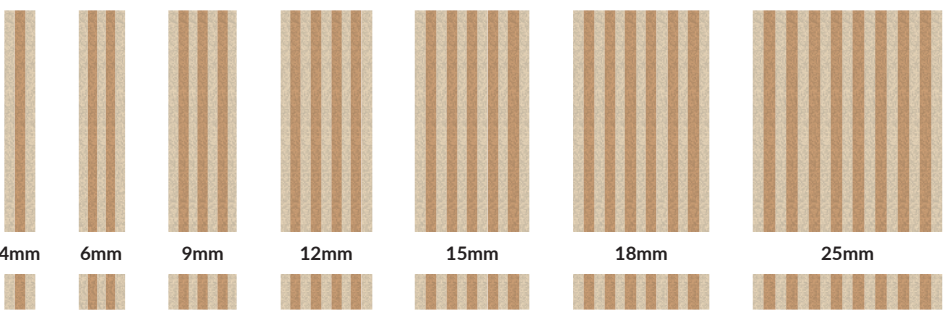
At least three layers of wood, referred to either as "plies" or "veneers", are bonded together with adhesives. Each ply is positioned at right angles to the layers above and below, improving strength and reducing shrinkage.

The two outer veneers are commonly referred to as the "face" and "reverse" and are graded based on their appearance and quality.

The "core" is the layer sandwiched between the two outer veneers. Plywood adhesive is graded for internal and external use.



**ABOVE:** Each of the plies are positioned at right angles to the layers above and below  
**BELOW:** Various plywood thicknesses drawn to scale showing the number of plies in each



## A GUIDE TO PLYWOOD FACE VENEER GRADES

Veneer grades refer to the finished appearance of the face which allows buyers to select a material suitable to their application.

Grading rules vary depending on the country of manufacture. Below is a UK grading system and may not be accurate for all plywood types.

GRADE	DESCRIPTION
B	Neatly cut one-piece being almost defect-free and sanded smooth
BB	Minor defects are permitted within strict limits provided they are filled and sanded smooth
C+/C-	Permits all defects, open or closed, although limited in number and size. However, open defects are sanded for the UK market.



## PLYWOOD APPLICATIONS AND ITS MANY USES

The unique cross-grain construction of plywood results in a strong and stable panel so that even thin and/or lightweight varieties are suitable for challenging applications.

Several structural and non-structural hardwood, softwood and mixed core varieties are produced for a wide range of applications including walls, roofs, flooring, furniture, vehicle manufacturing as well as marine plywood for boats or areas exposed to high humidity or wetting.

For structural use, it is vital you choose a plywood that complies with the required British Standard. Please contact our Sales Team for advice.

The guide to plywood applications and uses on this page is not intended as an exhaustive list. If you have a specific project in mind, please contact our Sales Team for advice.

TYPE	APPLICATION AND USE
HARDWOOD	<ul style="list-style-type: none"><li>• Ceilings</li><li>• Walls (external)</li><li>• Heavy-duty floors</li><li>• Furniture / packing cases</li><li>• Van lining</li></ul>
SOFTWOOD	<ul style="list-style-type: none"><li>• Concrete shuttering</li><li>• Internal joinery</li><li>• Floors</li><li>• Furniture / packing cases</li></ul>
MARINE	<ul style="list-style-type: none"><li>• Boat building (not waterproof)</li><li>• Outdoor furniture</li><li>• Areas of exposure to high humidity/wetting</li></ul>
FG1™	<ul style="list-style-type: none"><li>• Flooring Grade Plywood (certified BS 8203:2017)</li><li>• Suitable for all flooring applications</li></ul>

**PLEASE NOTE:** Plywood panels for Structural Use applies from 9mm thickness upwards. Panels less than 9mm do not possess structural load-bearing strength. Please ask for advice.





# PLYWOOD BONDING BS EN314-2:1993 AND PLYWOOD SPECIFICATION BS EN636:2003

## INTRODUCTION

EN314-2 and EN636 both work together as “harmonized standards” to clarify which plywoods are suitable under different conditions. These tests then determine the class that a particular plywood can be specified under.

PRODUCT	Merchant Grade MLH	Q-Mark (Trada endorsed)	FG1™
ORIGIN	China	China	Indonesia
HARDWOOD SPECIES	Poplar	Eucalyptus	Meranti
PLYWOOD BOND PERFORMANCE	BS EN314-2 Class 2	BS EN314-3 Class 3	BS EN314-2 Class 3
BRITISH STANDARD	BS EN636-2 Class 2	BS EN636-3 Class 3	BS EN636-3 Class 3
DOES IT MEET CFA APPROVAL?	✗	✗ Class 3 is a suitable alternative but not guaranteed by B.S.	✓
USAGE	Only humid (not wet) conditions	Exterior and exposure to weather	Exterior and exposure to weather

## BS EN314-2

Plywoods are produced using bonds. The types of bonds used are based on whether the plywood is for use in dry, humid or exterior conditions.

BS EN314-2 plywood bonding quality requirements define three classes on the basis of test requirements that the plywood bond must meet (see table opposite).

These classes are determined by laboratory tests in which the different plywood boards are tested to destruction to assess how well the bond has survived the weathering process.

The integrity of the plywood bonds after the tests will determine its bond class. Once that has been established, assessment to **EN636** can begin.

CLASS	USAGE
CLASS 1	Dry conditions (interior, dry use only)
CLASS 2	Humid conditions (protected external service; damp internal uses and limited exposure during construction)
CLASS 3	Exterior conditions (exposure to weather over substantial periods or continuous exposure to relative high humidity)

## AND DON'T FORGET...

In line with all other timber-based products, it is vital that plywood specified for use in humid and/or exterior conditions receives an appropriate protective finish to all faces and edges, to minimise moisture ingress and to prolong the service life of the product.

## BS EN636

Following on from BS EN314-2 testing, plywood boards are then required to comply with one of the three performance classes within EN636 for use in construction. This takes into account the quality of the bond and the durability of the timber species used.

The requirements for each class can be summarised as follows:

USE	EN	USAGE CLASS	END USE
Plywood for use in <b>dry conditions</b>	<b>EN 636-1</b>	<b>Class 1</b> — appropriate for normal interior climates	Warm roofs, intermediate floors, internal timber frame and partition walls
Plywood for use in <b>humid conditions</b>	<b>EN 636-2</b>	<b>Class 2</b> — appropriate for protected external applications.  It is also suitable for interior situations where the service moisture content is raised above the Class 1 level.	Cold roofs, ground floors and external timber frame walls
Plywood for use in <b>exterior conditions</b>	<b>EN 636-3</b>	<b>Class 3</b> — designed for exposure to weather over sustained periods	Fully exposed service conditions

## PURCHASING THE RIGHT PLYWOOD FOR YOUR PROJECT

It is vital to specify and purchase plywood suited to the job you are using it for, based on the classes above. For example:

- If you have previously purchased Interior or MR (moisture resistant) plywood for construction purposes, you should now specify plywood to comply with **EN 636, Class 1**.
- If you have previously specified or purchased WBP (weather and boil-proof) or Exterior quality plywood for construction purposes, you should now specify plywood to comply with **EN636, Class 3**.



Image credit: Chiot's Run/Flickr

# FG1 & RVP: PERFECT PARTNERS



**FG1 is perfect for RVP where a level and rigid subfloor is required.**

When bonding to a plywood subfloor, it's essential you avoid the risk of delamination and face veneers failing. Only FG1 has 1.3mm thick top and reverse veneers and surpasses BS 8203:2017.



## FG1™ FLOORING GRADE PLYWOOD

Inferior plywood flooding UK markets in recent years has caused significant problems for the construction industry. In response, and with the need for clarity of plywood standards, Lionvest introduced FG1: a superior quality Flooring Grade hardwood panel.

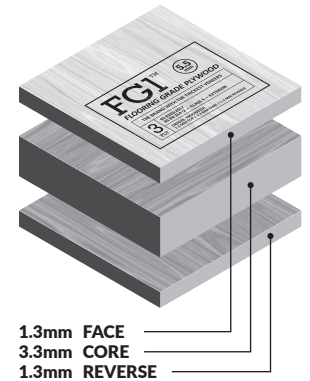
The result is a panel that far exceeds British Standard BS 8203:2017 *Installation of resilient floor coverings — code of practice*, which requires a minimum thickness of **0.75mm** for top and reverse veneers.

**FG1 has 1.3mm top and reverse veneers** (prior to sanding), greatly surpassing the Standard and offers several unique advantages:

- Far greater stability, structural and mechanical properties, making it ideal for gluing and bonding
- Greatly reduces the risk of delamination and face veneers failing when sawn or bonding to
- High manufacturing qualities makes it suitable for a wide range of applications where strength and durability are a priority

Incredibly, many inferior quality plywood panels sold in the UK have only as little as **0.15-0.3mm** top and reverse veneers, causing serious issues with delamination and face veneers failing, which is why it is vital to have thicker face veneers when bonding to.

**This is also why FG1 is an essential step to ensuring successful floorlaying and subfloor preparation.**



### FG1™ — Flooring Grade Plywood (Meranti / Mersawa) — Class 3 EXT Glue (EN314-2)

FINISH	GRADE	THICKNESS	LENGTH	WIDTH
Unfinished and lightly sanded	BB/CC	5.5mm	1220mm	610mm (4×2ft)
Unfinished and lightly sanded	BB/CC	5.5mm	2440mm	1220mm (8×4ft)
Unfinished and lightly sanded	BB/CC	9mm	2440mm	1220mm (8×4ft)
Manufactured to	BS EN 636-2			
Appearance class	Based on Class 1 from BS EN 635-2			
Glue bond	EN 314-2 Class 3 (Exterior) LFE E1 Emission			
Moisture content	8-10%			
Thickness tolerance	5.5mm: ±0.2mm			
Dimensional square tolerance	Tight to EN 315			
Veneers	Overlay quality without core overlap or gaps			
Length AND width	-0.0/+2.0mm			
Diagonal difference	Maximum 2.0mm			
Edge straightness	Maximum 1.0mm			



**FG1™**  
FLOORING GRADE PLYWOOD

# FLOORING THE COMPETITION



## FG1™

**THE BRAND WITH THE THICKEST VENEERS**

FG1™ Plywood is the first plywood panel in the UK not only to be fully compliant with the new specifications listed in Annex A of BS 8203:2017 – but also to fully exceed them.

Astonishingly, many poor quality plywoods have as little as 0.15-0.3mm thick top and reverse veneers, which can lead to serious issues with delamination and face veneers failing. Our 1.3mm thick outer veneers offer far greater bonding capability which helps prevent delamination and glue percolation.

**FG1 is the No.1 panel for successful floorlaying and subfloor preparation.**  
**Nothing else comes close.**

FG1 by **LIONVEST TRADING**  
(UK) LTD



FG1™ is a brand of Lionvest Trading (UK) Ltd and is manufactured by Sumber Mas Indah Plywood in Indonesia, a member of the TFT Woodexperts Diamond Mark Certification Scheme. \* T&C apply.

# Q-MARK PLYWOOD

Q-Mark Plywood is a versatile panel suitable for a number of applications. Poplar veneers produce a lightweight panel while Eucalyptus veneers produce a more durable panel.

Structural applications include walls, roofing, wind bracing and flooring and is ideal for outdoor use once sealed with a suitable preservative, while non-structural uses include bookcases, outdoor furniture and crates/packing cases.



## Q-Mark Plywood — Hardwood — Class 3 EXT Glue (EN314-2)

FINISH	GRADE	VENEER	CORE	THICKNESS	LENGTH	WIDTH
Unfinished & lightly sanded	B/BB	Eucalyptus	Eucalyptus	3.6mm	1220mm	610mm (4×2ft)
Unfinished & lightly sanded	B/BB	Eucalyptus	Eucalyptus	5.5mm	1220mm	610mm (4×2ft)
Unfinished & lightly sanded	B/BB	Eucalyptus	Eucalyptus	3.6mm	2440mm	1220mm (8×4ft)
Unfinished & lightly sanded	B/BB	Eucalyptus	Eucalyptus	5.5mm	2440mm	1220mm (8×4ft)
Unfinished & lightly sanded	B/BB	Eucalyptus	Eucalyptus	9mm	2440mm	1220mm (8×4ft)
Unfinished & lightly sanded	B/BB	Eucalyptus	Eucalyptus	12mm	2440mm	1220mm (8×4ft)
Unfinished & lightly sanded	B/BB	Eucalyptus	Eucalyptus	18mm	2440mm	1220mm (8×4ft)
Unfinished & lightly sanded	B/BB	Eucalyptus	Eucalyptus	25mm	2440mm	1220mm (8×4ft)
Unfinished & lightly sanded	B/BB	Eucalyptus	Eucalyptus	18mm	2440mm	1220mm (8×4ft)



# FAR EASTERN MLH (MIXED LIGHT HARDWOOD)

Far Eastern MLH is a versatile plywood panel with a variety of uses. Poplar veneers produce a lightweight panel and Eucalyptus veneers produce a more durable panel.

MLH has a light sanded finish which can easily be cut and painted. Applications include treated exteriors such as decking, sheds and fencing and moist interior uses such as bathrooms, kitchens and boat interiors.



## Far Eastern MLH (Mixed Light Hardwood) Plywood — Class 2 EXT Glue (EN314-2)

FINISH	GRADE	VENEER	CORE	THICKNESS	LENGTH	WIDTH
Unfinished and lightly sanded	B/BB	Eucalyptus	Poplar	3.6mm	2440mm	1220mm (8×4ft)
Unfinished and lightly sanded	B/BB	Eucalyptus	Poplar	5.5mm	2440mm	1220mm (8×4ft)
Unfinished and lightly sanded	B/BB	Eucalyptus	Poplar	9mm	2440mm	1220mm (8×4ft)
Unfinished and lightly sanded	B/BB	Eucalyptus	Poplar	12mm	2440mm	1220mm (8×4ft)
Unfinished and lightly sanded	B/BB	Eucalyptus	Poplar	18mm	2440mm	1220mm (8×4ft)
Unfinished and lightly sanded	B/BB	Eucalyptus	Poplar	25mm	2440mm	1220mm (8×4ft)



For prices,  
please call  
our Sales Team  
on  
01273 426570



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## BIRCH PLYWOOD

Birch plywood has a pale colour with a fine and well sanded finish, allowing limitless customising options. It has superb physical and mechanical properties, characterised by excellent strength and precision.

It offers high performance for the construction and furniture sectors as well as vehicle construction, playground fixtures, sports and musical equipment, cabinet making, desks and shelves.



### Birch Plywood – Class 3 EXT Glue – LFE E1 Emission (EN314-2)

FINISH	GRADE	VENEER	CORE	THICKNESS	LENGTH	WIDTH
Unfinished and lightly sanded	Request	Birch	Birch	4mm	2440mm	1220mm (8×4ft)
Unfinished and lightly sanded	Request	Birch	Birch	6mm	2440mm	1220mm (8×4ft)
Unfinished and lightly sanded	Request	Birch	Birch	9mm	2440mm	1220mm (8×4ft)
Unfinished and lightly sanded	Request	Birch	Birch	12mm	2440mm	1220mm (8×4ft)
Unfinished and lightly sanded	Request	Birch	Birch	15mm	2440mm	1220mm (8×4ft)
Unfinished and lightly sanded	Request	Birch	Birch	18mm	2440mm	1220mm (8×4ft)
Unfinished and lightly sanded	Request	Birch	Birch	24mm	2440mm	1220mm (8×4ft)

## OSB (ORIENTED STRAND BOARD)

OSB is an engineered wood product formed by layering strands of wood in specific orientations, then compressed and bonded together using both wax and resin adhesives. It has good dimensional stability with no knots or voids in the structure.

OSB/1 is suitable for interior fitments (including furniture) for use in dry conditions. Perfect for flooring, roofing, wall sheathing, site hoarding and other applications where strength and moisture resistance are paramount.



### OSB (Oriented Strand Board) – Non EXT – OSB/1

FINISH	GRADE	VENEER	CORE	THICKNESS	LENGTH	WIDTH
Unfinished (tongue & grooved)	n/a	n/a	n/a	9mm	2440mm	1220mm (8×4ft)
Unfinished (tongue & grooved)	n/a	n/a	n/a	11mm	2440mm	1220mm (8×4ft)
Unfinished (tongue & grooved)	n/a	n/a	n/a	15mm	2440mm	1220mm (8×4ft)
Unfinished (tongue & grooved)	n/a	n/a	n/a	18mm	2440mm	1220mm (8×4ft)





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