

## Specifications

Table 1 below sets out for each of the categories whether these principles are critical or not.

Use category	Glue bond type required	Durable species or treated	Structural grade required
1	Exterior and structural quality	yes	yes
2	Exterior/moisture resistant and structural quality	Yes/no	yes
3	Interior and non-structural	no	no

Table 2 below sets out, for a number of worldwide plywood standards, if they meet these criteria and if a specific plywood type/grade is suitable for our use categories. Where a particular grade within one of these standards cannot be obtained, the table may also be used as guidance for selection of suitable alternative plywood.

Country	Standard	Grade/class description	Application	Suitability for Use categories		Treatment required <sup>A, B</sup>	Comments
UK and EU	BS EN 636: 2003	Strength grades separated into 'F' classes, ranging from F3 (lowest strength values) to F80 (highest strength values).		Application depends on the service class, and is split into three sections within the standard (see below).			There is no UK domestic production of plywood so all material is imported, but should comply with British Standard.
UK and EU	BS EN 636 - 1	Plywood for use in dry conditions	Non-structural interior applications e.g. Partitions, non-load bearing walls.	636-1 G	3	No	
			All permanent structural applications e.g. Flooring, bracing, webs in beams.	636-1 S	3	No	
UK and EU	BS EN 636 - 2	Plywood for use in humid conditions	Non-structural interior applications e.g. Partitions, non-load bearing walls.	636-2 G	3	No	
			All permanent structural applications e.g. Flooring, bracing, webs in beams.	636-2 S	2,3	Preservative treatment will be required for use in Category 2.	
UK and EU	BS EN 636 - 3	Plywood for use in exterior conditions	Non-structural interior applications e.g. Partitions, non-load bearing walls.	636-3 G	3	No	
			All permanent structural applications e.g. Flooring, bracing, webs in beams.	636-3 S	1,2,3	Preservative treatment will be required for use in Categories 1 and 2.	

Australia and New Zealand	AS/NZS 2269: 2008	Grades separated into 'F' classes, ranging from F7 (lowest strength values) to F27 (highest strength values).	All permanent structural applications e.g. Flooring, bracing, webs in beams.	1, 2, 3.	Preservative treatment will be required for use in Categories 1 and 2.  Plywood to be treated in conformance with AS/NZS 1604 Part 3.	Note: F34 is included in the standard but is not generally available.
Australia and New Zealand	AS/NZS 2270: 2006	Separated into visual grades only as these products have no structural capacity. Grades from A (best, clean face) to D (large knots and splits permitted) available.	Non-structural interior applications e.g. Partitions, non-load bearing walls.		3 No	
Japan	JAS SE-1 MAFF 1751 Japanese Agricultural Standard for Plywood	Structural: Each grade of structural plywood is type tested and has the relevant Modulus of Elasticity (MOE) stamped on the face of the board. Some standard MOE's may be printed based on a thickness/strength ratio described in the standard.	All permanent structural applications e.g. Flooring, bracing, webs in beams.	Products with Type 1 bond	1, 2, 3.	Preservative treatment will be required for use in Categories 1 and 2.
				Products with Type 2 bond	3	
Japan	JAS SE-1 MAFF 1751 Japanese Agricultural Standard for Plywood	Non-structural: Referred to as 'Plywood for general use' in the standard.		Products with Type 1 bond	1, 2, 3.	Preservative treatment will be required for use in Categories 1 and 2.
				Products with Type 2 bond	3	
USA	American Plywood Association (APA) Voluntary Standards	Structural plywood available based on standardised constructions detailed within the standard, or type testing. Labelled with 'span rating' to determine structural capacity.	All permanent structural applications e.g. Flooring, bracing, webs in beams.	Products labelled exterior	1, 2, 3.	Preservative treatment will be required for use in Categories 1 and 2.
				Products labelled Exposure 1 or Interior	3 No	
South America (principle manufacturing countries: Brazil, Paraguay, Chile, Argentina, Guyana)	Product produced for the local market has no governing standards. Product made for export should comply with those standards listed above.	N/A for domestic material. Export material should comply with standards listed above.	Depending on compliance with overseas standard; all permanent structural applications e.g. Flooring, bracing, webs in beams.			Preservative treatment will be required for use in Categories 1 and 2.
Asia (principle manufacturing countries: China, Malaysia, India, Indonesia, Philippines)	Product produced for the local market has no governing standards. Product made for export should comply with those standards listed above.	N/A for domestic material. Export material should comply with standards listed above.	Depending on compliance with overseas standard; all permanent structural applications e.g. Flooring, bracing, webs in beams.			Preservative treatment will be required for use in Categories 1 and 2.
<p><sup>A</sup> Preservative treatment required if species is not durable or if durability of species is unknown.</p> <p><sup>B</sup> If Termites a risk or high risk then <b>all</b> plywood needs to be preservatively treated unless timber species is known to be</p>						

Variety As per stated in contract.  
Dimensions As per stated sizes and total volume required.  
Tolerance Maximum 5mm of in width and height. Usable length to be minimum as stated in contract, longer by 50 to 100mm is recommended.  
Seasoning Dried to 20% maximum moisture content (Specify drying method and time).  
Treatment Treated against insects and termite in particular. Treated against mould.  
Grade Class I, II, III, IV, as per contract. International suppliers will supply to international standard construction grades.  
Serious damage to outer fibres caused by poor storage, transporting, etc. will result in rejection of the goods.

**If plywood must be visually graded:**

Decay Free from pests and rot  
Sloping grain None  
Knots, sound None  
Knots, unsound None  
Wane, want and sapwood None  
Split None  
Shake None  
Compression failure None  
Warp None  
Sweep/crook None  
Taper None  
Spiral grain None

Required Documentation	Supplier		
	Local	National	International
Certificate of legality from national government	YES	YES	YES
Guarantee that no timber from the CITES list	YES	YES	YES
Timber travel document	YES	YES	YES
Sawmill license	YES	YES	YES
Proof of sustainability	Preferable	YES	YES
Phytosanitary certificate	NO	YES	YES
Customs clearance documentation	NO	NO	YES
Documents relating to other national law	Preferable	YES	YES
Description of harvesting/logging process	YES	YES	YES
Description of seasoning and treatments used.	YES	YES	YES
Certification of quality by a national or international grading system.	Preferable	YES	YES

## **Phytosanitary certificate checklist**

Details of packing

Botanical names of tree species and whether wood is softwood or hardwood

Country where tree came from

Serial numbers of phytosanitary certificates issued in the country of origin (import if timber is re-exported)

Dimensions / weight of packaging articles plus volume of wood in cubic metres

Name / number of boat or plane

Wood treatment type (e.g. Chemical Pressure Impregnation)

Name of chemical used

Duration of treatment applied for effective treatment

Dosage rate of chemical (number of grams per cubic meter)

Date of treatment

### **TREATMENT OF WOOD:**

The treatment should comply with safe, acceptable standards against insect, especially termite, and fungal attack, to the required Hazard level as per contract. Treatment to comply with any applicable health and safety standards. In addition, the supplier must guarantee in writing that the treatment is completely fit for its purpose i.e. it is safe for humans (adults, and children of all ages) in circumstances where the treatment will be used internally (including in bedrooms / sleeping areas), with possible prolonged direct skin contact with the wood, over a period of many years.

All treatments to be certified by third party audit scheme such as AgriQuality treatment programme or equivalent.

Supplier to specify name of treatment chemical and registration certification with parameters of penetration and retention as per applicable standards.