
A SIMPLE GUIDE

The above mentioned standards are “Harmonised standards” working in tandem with each other in respect of Bonding Quality and Durability of Wood Species with EN314 referring specifically to the bonding quality and EN636 referring to durability of the wood species and bonding

**EN314-2: 1993 PLYWOOD – BONDING QUALITY**
This classifies plywood by it’s bonding quality only and refers to 3 bond classifications dependant upon the intended end use.
Bonding is determined by the type of glue and core veneer quality (ie taking into account physical defects such as knot holes, splits etc)

**(Bond) Class I: Suitable for dry interior use**

**(Bond) Class II: Suitable for use in humid areas or exposure to occasional wetting**

**(Bond) Class III: Suitable for unprotected exterior use or exposure to frequent wetting**

Following exposure to a simulated hostile weather environment, accelerated in a laboratory, plywood is tested to destruction to assess how well the bond has survived the weathering process.

Once bonding quality has been established to EN314, assessment to EN636 can begin

**EN636: 2003 PLYWOOD – SPECIFICATIONS**
These classify plywood by taking into account the bond quality AND the biological durability of the wood species used in the plywood

**(Specification) Class I: Suitable for dry interior use only**
Plywood to be used in conditions characterised by a moisture content in the material corresponding to a temperature of 20°C and a relative humidity of the surrounding air only exceeding 65% for a few weeks per year. These conditions correspond with service class I according to EN1995-1-1
Boards of this type are suitable for use in biological hazard class 1 of EN335-3

**(Specification) Class II: Suitable for use in humid areas or exposure to occasional wetting**
Plywood to be used in conditions characterised by a moisture content in the material corresponding to a temperature of 20°C and a relative humidity of the surrounding air only exceeding 85% for a few weeks per year. These conditions correspond with service class I2 according to EN1995-1-1
Boards of this type are suitable for use in biological hazard class 1 & 2 of EN335-3

This plywood is appropriate for protected external applications eg behind cladding or under roof coverings) but it is also capable of resisting weather exposure for short periods. It is also suitable for interior situations where the service moisture content is raised above humidity of dry conditions

**(Specification) Class III:** Suitable for unprotected exterior use or exposure to frequent wetting

Plywood to be used in climatic conditions leading to a higher moisture content than in service Class II. These conditions correspond with Service Class III according to EN1995-1-

Boards of this type are suitable for use in biological hazard class 1, 2 & 3 of EN335-3

**REQUIREMENTS:**

Full details of testing requirements are detailed in EN314-1 and EN314-2 but the following table and list show which each bond class must be capable of withstanding

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<th>PRE-TREATMENTS</th>
<th>5.1.1</th>
<th>5.1.2</th>
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</thead>
<tbody>
<tr>
<td>Class I</td>
<td>Dry Interior</td>
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<tr>
<td>Class II</td>
<td>Covered Exterior</td>
<td>X</td>
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<tr>
<td>Class III</td>
<td>Non Covered Exterior</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
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</tbody>
</table>

* When full phenolic glue is used, pre-treatment 5.1.3 can be used to provide pre-treatment 5.1.4 is occasionally used as a test of confirmation

**PRE-TREATMENTS**

5.1.1 Immersion for 24 hours in water at (20 ± 3) °C

5.1.2 Immersion for 6 hours in boiling water followed by cooling in water at (20 ± 3) °C

5.1.3 Immersion for 4 hours in boiling water, then drying in a ventilated drying oven for 16 hours to 20 hours at (60 ± 3) °C, then immersion in boiling water for 4 hours followed by cooling in water at (20 ± 3) °C for at least 1 hour

5.1.4 Immersion for (72 ± 1) hour in boiling water followed by cooling in water at (20 ± 3) °C for at least 1 hour

Information from EN314- Plywood Bonding Quality:
1:2004 – Test Methods
2:1993 – Requirements

THE ABOVE-MENTIONED INFORMATION IS PROVIDED FOR INFORMATION ONLY – FULL COPIES OF THE APPROPRIATE STANDARDS SHOULD BE OBTAINED FROM [www.bsi-global.com](http://www.bsi-global.com)

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