

Plywood Standards an Explanation

EN 314-2: 1993 – PLYWOOD – BONDING QUALITY, REQUIREMENTS **EN 636: 2003 – PLYWOOD – SPECIFICATIONS**

ARE YOU STILL CONFUSED? THERE'S NO NEED TO BE.....

Fortunately, there are only two material components in plywood: wood & glue. How these components interact will ultimately define how the plywood performs. These two standards provide a relatively straightforward way of classifying the outcome.

EN 314-2:1993 Plywood—Bonding Quality, classifies plywood by bonding quality only and gives rise to 3 bond classes dependent upon the intended end use. Bonding quality is determined by the adhesive type and core veneer quality (physical defects such as knot holes and splits):

(Bond) Class I: suitable for dry interior use only

(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.

EN 636: 2003, Plywood—Specifications, classifies 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

(Specification) Class II: suitable for use in humid areas or exposure to occasional wetting

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

LOOK FAMILIAR? WELL IT SHOULD...

EN314 and EN636 are harmonised standards, so, to achieve EN636 Class II (frequently labelled EN636-2) the bonding quality, as a minimum, must be EN314 Class II. Some plywoods have a bonding quality of EN314 Class III but, because of limited biological durability of the timber species, can only achieve EN636-2. This is precisely the case with softwood plywood.

It is worth bearing in mind that, provided the EN314 bonding is Class III to start with, an otherwise EN636-2 plywood can be upgraded to EN636-3 by preservative treatment, to treatment class T3 (DD CEN/TS 1099:2007).

Although some of the plywood sold in the UK will achieve EN314 Bond Class III, when assessed to EN636, it will only achieve EN636-2, because of limited biological durability of the wood. Exceptions to this might include tropical hardwood throughout plywood and marine grade plywood, provided no sapwood is present. Sapwood is, however, difficult to eliminate.

* Biological durability means: the natural capacity of the wood to resist the detrimental effects of fungal decay (rot) and beetle larvae (woodworm).