

Permissible bark and wane in wood pallets and packaging

Wane is the curved outer surface of the tree which is exposed when the bark has been removed. Objections to the presence of wane are based on poor appearance or hygiene but substantial wane also affects strength. Wood as a natural material produces a range of qualities and commercial supplies of timber have to reflect what the forest produces. Over recent years it has become commonplace to specify "mixed grade" which means a mix of 1st class (square material) with an agreed amount of 2nd class (material with some wane such as shown in the illustration). This



is happening with both softwood and hardwood supplies and agreement on what the acceptable mix is - eg. 80/20 and what an acceptable amount of wane has not yet been reached. Due to price constraints wood packaging is mostly drawn from the 2nd class material and pallet makers set a permissible wane allowance varying with individual specifications, some pallet specifications do not permit any wane. A standard method of measuring wane is given in EN 1310: *Round and sawn timber - measurement of features*

A useful grading system for wood packaging wane has been published in BS EN 12246: 1999: *Quality classification of timber used in pallets & packaging* which lists two softwood/hardwood grades - **P1** (top grade) and **P2** (lower grade). Both grades permit a limited amount of wane (and also limit the size of knots, boxed heart and edge pith) but the standard would have been more useful if it contained a 3rd top grade with all wane eliminated. (The baseboard in the illustration would meet neither Class P1 nor P2 – see Table 1)

An extract from BS EN 12246 grade rules are shown in Table 1.

Table 1 – Quality Criteria	Class P1	Class P2
Wane (without bark). If wane is to be excluded, it may be specified in product standards or contracts	Permitted up to 25% of the piece length, up to 33% of the thickness and allowed on both sides of one face if $\leq 10\text{mm}$ from each side	Permitted up to 30% of the piece length, up to 50% of the thickness and allowed on both sides of one face if $\leq 20\text{mm}$ from each side

Phytosanitary considerations - a recent requirement for bark and wane restriction is not concerned with appearance but with ISPM 15, an international guideline for regulating wood packaging material for international shipments with the objective of controlling undesirable transmission of biological pests. In an extension of ISPM 15, Australia, the EU, and certain other countries proposed that wood packaging be manufactured entirely free of bark. Their contention is that bark is a pathway for re-infestation, whether treated or not. (The UK already routinely follows this in their programme.)

The ISPM 15: 2002 Definition of Bark Free Wood - *Wood from which all bark (excluding the vascular cambium sometimes known as "inner bark", ingrown bark around knots sometimes known as "bark inclusions", and bark pockets between rings of annual growth also known as "bark inclusions") has been removed.*

Copyright PalletLink® While every effort is made to ensure accuracy of the data given, PalletLink cannot accept liability for loss or damage arising out of the use of the information. The details supplied are relevant as at the date of this publication which is one example in an extensive series of Datasheets. Members are advised to contact PalletLink if in doubt over any aspect of pallet or case manufacture or usage.