

Are the scaffold boards you're using in a safe condition?

The Health and Safety Authority is concerned with an increased detection rate of sub-standard scaffold boards in use on construction sites and in an increase in the number of accidents involving sub-standard boards.

As per the Code of Practice for Access and Working Scaffolds all boards should comply with the BS 2482 standard (standard updated in 2009).

Boards manufactured to the standard can be identified by a marking on their end bands. BS2482 requires that the end bands are marked with the following:

- Number and year of British Standard;
- Identification mark of the supplier;
- The letter M or V (mechanically or visually graded);
- The word "support", followed by the target span in metres up to which the board may be supported;
- Where appropriate, the identification mark of a third-party certification body.

The end bands also have an important role in protecting the vulnerable end grain of the boards. They should extend around the edges of the board by at least 150mm for 38mm boards and at least 100mm for 63mm boards. The bands should be secured with three clout nails into the end of the board and two on each edge. BS2482 also permits the use of teeth formed in the end band or special long staples to secure the end bands. Damaged end bands can leave sharp edges which can cause cuts when handled.

Any scaffolding equipment, including scaffolding boards, particularly if they have been in storage for a period of time, must not be used unless inspected by a competent person and deemed fit for purpose. It is vital that all scaffold boards are checked regularly thereafter for damage, rot or any other feature which may reduce the strength of the board. It is a legal requirement that all equipment used for working at heights in construction is inspected by a competent person at least every seven days and records of these inspections kept. BS 2482 provides guidance and limits on the acceptability of defects in scaffold boards. Any board which fails one or more of the inspection criteria in BS2482 must be destroyed.

Boards must be cleaned prior to storage and inspection. Check for surface contamination of the board such as chemicals or cement. If you can't clean it and inspect it properly, then the board should be destroyed.

The following is a non-exhaustive list of some of the common defects occurring in scaffold boards:

Fissures (shakes, checks and splits)

BS2482 sets a limit for fissures on the face of boards of 225mm length, and 12mm or more in depth. Careful attention should be paid to splits in the ends of boards which can be partially hidden by the end bands, but may pass through the full thickness of

the board.

Wane

The standard permits a limited amount of wane (a rounded edge caused by the curvature of the log from which a board has been cut). The limits on wane are 25mm on the face of the board, and 12mm on the edge of the board.

Mechanical damage

If the board is damaged to an extent that will reduce its strength, or is likely to cause unsafe footholding, or an injury whilst handling the board, then it should be destroyed.

In normal use a board's top face on one job may become its bottom face on the next job. Mechanical damage may occur on the first job but the failure may not happen until the board is turned and loaded in the opposite direction. The user causing the damage may not witness the failure and is unlikely to be aware of the consequences of their actions.

Common examples of unacceptable damage include:

- Broken or damaged end bands;
- Wood broken from the edge of the boards which significantly reduces the cross-section of the board;
- Loose or broken knots;
- Damage caused by being struck by the forks of a forklift truck;
- Excessive cuts in the faces of boards caused by hand saws, circular saws or angle grinders;
- Transverse cracks caused by overloading.

Distortion

As scaffold boards are exposed to all types of weather, the wood is exposed to sunlight as well as cycles of wetting and drying, which can cause boards to distort. A distorted board is a dangerous board, as it can move in service. The standard sets limits on cup, bow, spring and twist. If any board exceeds these limits it should be destroyed.

Insect attack

If a board contains wormholes or wood wasp holes or if there is an infestation of the timber then the board must be destroyed.

Fungal Decay

Boards must be free from any signs of fungal decay or rot. Fungal decay, usually wet rot, is common in poorly stored scaffold boards. Wood is vulnerable to attack when the moisture content is over 20%. It can be detected by discolouration of the wood, which also becomes softer. Rot often starts at cracks or around knots in wood because these areas are wetter as water is retained in the cracks. The boards will also often smell musty. A decayed board loses weight and so will feel lighter than an equivalent sound board. Below shows two examples of decay.



In the early stages of decay there is a minor loss in bending strength or stiffness, but there is considerable loss in resistance to impact loads, for example, a worker jumping onto a board, or lifting a heavy sill etc. In the later stages of decay large holes filled with soft decayed wood appear. The rotted wood has transverse cracks in the wood fibres and the material crumbles easily.

Decay in your boards can be reduced by storing planks properly when not in use. This is particularly relevant in these economic times when large quantities of scaffolding may be stored for longer periods of time.

Boards should be stored preferably under cover and clear of the ground. Spacers must be used between each layer of stacked boards to allow an adequate flow of air around the boards to dry them out.

An example of this is shown below.



Remember:

Check to see if the scaffold boards you are using comply with the following:

- All scaffolding boards conform to BS 2482;
- They are cleaned prior to inspection;
- They are not damaged or decayed in any way;
- All boards in storage are stacked in a way which allows for ventilation;
- All boards are inspected before installation and at regular intervals thereafter;
- Where machine testing is carried out ensure that boards are tested in both directions. This should also be completed in conjunction with a visual inspection of the boards.

For more information please contact wcu@hsa.ie or on 1890-289 389

Relevant reference standard / guidance:

BS2482:2009

NASC TG6:10