

Specification for

Grading of ash and hickory wood handles for hand tools

Confirmed
January 2011

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Machine, Engineers and Hand Tools Standards Policy Committee (MTE/-) to Technical Committee MTE/15, upon which the following bodies were represented:

- British Coal Corporation
- British Telecommunications plc
- Consumer Policy Committee of BSI
- Department of Trade and Industry [Mechanical Engineering and Manufacturing Technology Division (Mmt)]
- Electricity Supply Industry in England and Wales
- Engineering Equipment and Material Users' Association
- Federation of British Engineers' Tool Manufacturers
- Federation of British Hand Tool Manufacturers
- Handle Manufacturers' Association
- Institute of Carpenters
- Institution of Production Engineers
- Ministry of Defence

The following body was also represented in the drafting of the standard, through subcommittees and panels:

- Forestry Commission

This British Standard, having been prepared under the direction of the Machine, Engineers and Hand Tools Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 31 May 1990

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First published January 1965
Second edition May 1990

The following BSI references relate to the work on this standard:
Committee reference MTE/15
Draft for comment 87/71447 DC

ISBN 0 580 17808 0

Amendments issued since publication

Amd. No.	Date	Comments

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Foreword

This British Standard has been prepared under the direction of the Machine, Engineers and Hand Tools Standards Policy Committee and at the request of users and manufacturers of hand tools. It supersedes BS 3823-1:1965 which is withdrawn. In producing standards for tools which are provided with wood handles it has been customary to insert a requirement stating that the timber has to be well-seasoned, tough, straight grained; free from knots, shakes and other defects; and with a controlled moisture content at the time of manufacture. Such requirements have been criticized as being insufficiently indicative of the exact quality of material required, being too stringent in demanding theoretically perfect timber.

This British Standard provides criteria by which handles are accepted or rejected relative to grades and thus gives clearer definition on grading for the various hand tools standards which, where appropriate, will make reference to this document. In this way the fullest information will be available to inspectors of the tools and disputes on quality may be avoided.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Section 1. General

1 Scope

This British Standard specifies criteria for use in grading handles intended for fitting to general purpose hand tools including agricultural and striking tools.

The scope covers only unbleached handles manufactured from natural ash (*Fraxinus excelsior* and *Fraxinus americana*) and from any of the four true species of hickory as follows:

- shagbark hickory (*Carya ovata*);
- shellbark hickory (*Carya laciniosa*);
- pignut hickory (*Carya glabra*);
- mockernut hickory (*Carya tomentosa*).

The standard specifies the requirements for freedom from defects and the permissible blemishes which are tolerable in respect of the various grades of handles.

A method for determining the grain slope and recommendations for storing wood handles are given in the appendices.

NOTE The titles of the publications referred to in this standard are given on the inside back cover.

2 Definitions

For the purposes of this British Standard the definitions given in BS 6100-4.1 to BS 6100-4.4 apply together with the following.

2.1 General terms

2.1.1

annual ring¹⁾

a growth ring corresponding to an annual period of growth

2.1.2

air-seasoning¹⁾

the process of drying timber by exposure to natural atmospheric conditions

2.1.3

blemish¹⁾

any feature that mars the appearance of timber or other material without affecting its technical quality

2.1.4

conversion¹⁾

the process of sawing timber from the log

2.1.5

defect¹⁾

any feature that lowers the technical quality or commercial value of timber or other material and may therefore lead to its rejection or to its relegation to a lower grade

2.1.6

density¹⁾

the mass per unit volume, usually expressed in kilograms per cubic metre (or kg/m³)

2.1.7

fabrication

forming by any machining process, following conversion

2.1.8

fibres¹⁾

the long narrow elements (cells) of which wood and certain other plant tissues are largely composed

2.1.9

grain¹⁾

the general direction or arrangement of the fibres, e.g. spiral grain, straight grain

2.1.10

kiln¹⁾

a chamber used for seasoning and conditioning timber, in which the temperature and humidity of the circulating air can be suitably varied and controlled

2.1.11

kiln-seasoning¹⁾

the process of drying timber in a kiln

2.1.12

moisture content¹⁾

the amount of moisture in timber or other material expressed as a percentage of its oven-dry weight

2.1.13

seasoning¹⁾

the process of drying timber to a moisture range appropriate to the conditions and purposes for which it is to be used

2.1.14

sound¹⁾

free from decay

2.1.15

straight grain¹⁾

grain which follows a course generally parallel to the longitudinal axis of the piece

¹⁾ Repeated from BS 6100-4.1.