



O5.4.2009

**NATURALLY DURABLE HARDWOOD POLES – SPECIFICATIONS AND  
DIMENSIONS**

**AMERICAN NATIONAL STANDARD**



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#### **O5.4.2009, *Naturally Durable Hardwood Poles – Specifications and Dimensions.***

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American National Standard for Wood Poles and Wood Products

**NATURALLY DURABLE HARDWOOD POLES --  
SPECIFICATIONS AND DIMENSIONS**

**American Wood Protection Association**

Approved July 1, 2009

**American National Standards Institute, Inc.**

**Abstract**

Consists of specification and dimensions for Naturally Durable Hardwoods for utility wood poles. These wood species do not require preservative treatment for field use. The poles described are considered as simple cantilever members subject to transversal loads only.

## FOREWORD

The information contained in this Foreword is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

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Accredited Standards Committee O5 on Specifications for Wood Poles is accredited by the American National Standards Institute and develops standards for use by the telecommunications, utilities and other industries in areas dealing with wood poles and other wood products, including standardization of dimensional classifications, defect descriptions and limitations, manufacturing practices, fiber stresses and quality assurance procedures for wood poles and other wood products used in the construction of electric supply and communication lines.

Suggestions for improvement of this document are welcome. They should be sent to the American Wood Protection Association, P.O. Box 361784, Birmingham, AL 35236 <[www.awpa.com](http://www.awpa.com)>.

This Standard was processed and approved for submittal to ANSI by Accredited Standards Committee O5 on Specifications for Wood Poles. Committee approval of the Standard does not necessarily imply that all committee members voted for its approval.

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American National Standard for Wood Poles and Wood Products –

# Naturally Durable Hardwood Poles -- Specifications and Dimensions

## 1 SCOPE AND GENERAL REQUIREMENTS

### 1.1 Scope

This Standard provides minimum specifications for the quality and dimensions of naturally durable hardwood poles without preservative treatment to be used in single-pole utility structures. The poles described herein are considered as simple cantilever members subject to transverse loads only. Fiber strength values, provided as a basis for determining pole class sizes, apply only to poles that meet or exceed the minimum quality specifications. The pole class size tables for each fiber strength value for the naturally durable hardwood species represent their heartwood circumferences unless the sapwood also possesses high natural durability. These fiber strengths may be used to estimate the average groundline moment capacity of the naturally durable hardwood poles.

Only poles that meet the naturally durable hardwood species criteria established in this Standard will be allowed to be listed as an approved naturally durable hardwood pole.

### 1.2 Natural durability

The heartwood of all naturally durable hardwood poles listed in this Standard shall be tested in accordance with ASTM D2017 - 05 and have an Indicated Class of Resistance of "Highly Resistant" for all applicable test fungi. The sapwood shall have an indicated Class of Resistance of "resistant" or higher according to ASTM D2017-05. Sapwood does not need to be rated as "Highly Resistant", and if it is not, pole dimensions are based on heartwood measurements alone<sup>1</sup>. Sapwood tested and rated as "Highly Resistant" will be included in the determination of pole dimensions as described in clause 4 of this Standard.

Unless otherwise specified in purchase orders, all naturally durable hardwood species approved in this Standard will have a minimum of one half of an inch layer of sapwood left on the pole to allow for climbing of the poles.

NOTE: This Standard does not purport to establish the durability or Indicated Class Resistance of any particular species listed herein. The users of this Standard shall review all pertinent data and make their own determination as to the appropriateness of the natural durability of a particular species for the user's application.

### 1.3 Moisture Content (MC)

The natural durable hardwoods must have reached 20% MC or less at the heartwood/sapwood boundary, measured with a moisture meter before shipping. This requirement is intended to eliminate or reduce the potential splits caused by severe drying. Also, the pole classes in this Standard are determined in the dry state (see Dimension Tables below).

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<sup>1</sup> Refer to clause 4 of this standard to determine dimension methodology for heartwood.