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Woodworks Read-me & How To User Guide

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vs 1.0

Woodworks is an application designed for wood workers to find information about the species of wood they are working with and to perform some of the calculations that they may find necessary in working with wood.

The following calculations are performed by this application:

1. Density at Specific Moisture Content

2. Beam Deflection

3. Moisture Driven Dimensional Change

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System Requirements

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1. Windows Vista, 7, 8, or 8.1 (x86 and x64)

2. Microsoft .NET Framework 4.5 (x86 and x64)

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2014 - Development Team:

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Project Manager - Taylor Shearin

Requirements Team:

Sherrie Dowdy - Team Leader

Jessica Horne

Saiping Chen

Design Team:

Jonathan Barnett - Team Leader

Sergey Chibizov

Bradley Cross

Implementation Team:

Josh Houston - Team Leader

Tianran Hao

Eric Blumenstock

Nicolas McMahon

Quality Assurance Team:

Timothy Denton - Team Leader

Kristen Galloway

Kevin Patel

Risk Management - Jonathan Barnett

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Reference

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Information on wood descriptions and all information, not obtained from the user, used in the calculations performed by this program was obtained from:

U.S. Department of Agriculture, Forest Services, Forest Products Laboratory,

Gen. Tech. Rep. FPL-GTR-113. Wood Handbook – Wood as an Engineering Material. Madison, WI. 1999. PDF file.

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How To User Guide Contents:

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1. How to Install Woodworks

2. How to Display Information/Description of a Wood Species

3. How to Calculate Density at Specific Moisture Content

4. How to Calculate Beam Deflection

5. How to Calculate Moisture Driven Dimensional Changes

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1. How to Install Woodworks

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Steps:

1) Open the folder where the application is located.

2) Click on the Setup application file.

3) Click Install on the prompt window.

4) Application will Launch when installation is complete.

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2. How to Display Information/Description of a Wood Species

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Steps:

1) Select the Category of Wood.

2) Select the Species of Wood.

The Description will then be displayed.

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3. How to Calculate Density at Specific Moisture Content

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Steps:

1) Select the Category of Wood.

2) Select the Species of Wood.

3) Select Density at Specific Moisture Content from the Calculation

drop down menu.

4) Click on Calculate.

5) Select the % of Moisture Content.

6) Choose 12% or Green from the Moisture Content drop down menu.

7) Click on Calculate.

The Density will then be displayed.

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4. How to Calculate Beam Deflection

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Steps:

1) Select the Category of Wood.

2) Select the Species of Wood.

3) Select Beam Deflection from the Calculation drop down menu.

4) Click on Calculate.

5) Choose 12% or Green from the Moisture Content drop down menu.

6) Choose Flat or Edge from the Grain Type drop down menu.

7) Enter the appropriate dimensions of the beam.

8) Click on Calculate.

The Beam Deflection will then be displayed.

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5. How to Calculate Moisture Driven Dimensional Change

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Steps:

1) Select the Category of Wood.

2) Select the Species of Wood.

3) Select Moisture Driven Dimensional Change from the Calculation

drop down menu.

4) Click on Calculate.

5) Enter the width of the beam.

6) Choose Grain Direction - Radial or Tangential.

7) Click on Calculate.

The Moisture Driven Dimensional Change will then be displayed.