

TM 13-14

Retention – Penetration Test Samples

**Test Method for Preparing
Retention and Penetration
Testing Samples**



THE WINDOW & DOOR MANUFACTURERS ASSOCIATION

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1. PURPOSE

- 1.1. The purpose of this document is to provide guidelines for the preparing of the retention and penetration wafers for testing of millwork treatments and the efficiency of the chosen application method.

2. SCOPE

- 2.1. This method describes the sampling of a "sacrificial" part of a standard size. The data from the "sacrificial" part described in this test method may subsequently be used to determine the efficiency of the treatment to penetrate different wood species and/or the efficiency of the treating system (application method and treatment) to apply the treatment to the parts.
- 2.2. Any analytical method may be used to analyze the active ingredients in the "sacrificial" part. However, the analytical method chosen must be validated via a precision and accuracy statement.
- 2.3. This method may also be used for testing treated wood parts of other dimensions including actual millwork parts if desired.

3. SUMMARY

- 3.1. Outlined below are the procedures for sampling a "sacrificial" piece of wood. The samples produced may be used to determine the retention and penetration of the active ingredients. The method has a variant method for checking retention and penetration for parts treated prior to final machining of components.
- 3.2. Once the wafers are cut, the retention and penetration data may be generated by analyzing individual samples from multiple pieces, reporting the average and standard deviation; or, grinding the samples from multiple pieces into sawdust, thoroughly mixing the sawdust into one homogeneous sample, and analyzing the final sawdust composite.