



TORONTECH

FLAME RETARDANT WOOD PILE METHOD TESTER



Flame Retardant Wood Pile Method Tester — ToronFT™ FR-200WBT

ToronFT™ FR-200WBT Flame Retardant Wood Pile Method Tester is a combustion testing instrument designed to evaluate the burning mass loss rate and flaming burning time of wood products used in production and engineering projects — specifically wood with a thickness greater than 20 mm that has been treated with flame retardant impregnation — under specified burning conditions. Unlike the fire tube method used for thin decorative panels, the wood pile method is applicable to the thicker structural and engineering wood members encountered in real construction projects.

The Flame Retardant Wood Pile Method Tester features a vertically adjustable burner body, digital timer, rotameter-controlled gas flow, and fully automated ignition, timing, and reset functions — providing a complete, precise, and repeatable wood pile burning test platform for thick flame retardant-treated wood product qualification.

APPLICATIONS

Flame Retardant Wood Pile Method Tester — ToronFT™ FR-200WBT Applications

- Structural wood and engineered lumber manufacturers: flame retardant impregnation performance qualification for wood products with thickness > 20 mm
- Construction and engineering project material suppliers: fire retardant performance verification of structural wood members for building code compliance
- Third-party fire testing and certification laboratories: wood pile method burning mass loss and flaming time testing
- Quality assurance departments: production-lot sampling of flame retardant-treated thick wood product burning performance
- R&D departments: evaluation of flame retardant impregnation systems for structural wood applications



FEATURES

Flame Retardant Wood Pile Method Tester — ToronFT™ FR-200WBT Key Features

- Designed for flame retardant-impregnated wood products with thickness greater than 20 mm — applicable to structural and engineering wood used in construction and production projects
- Wood pile test method — appropriate for the dimensions and fire exposure geometry of thick structural wood members
- Adjustable burner body: height-adjustable up and down — accommodating different specimen dimensions and flame positioning requirements
- Digital timer for precise flaming burning time measurement — accurate, traceable timing data for every test
- Rotameter for precise burning gas flow control — maintaining standard-specified flame characteristics throughout the test
- Fully automated: automatic ignition, automatic timing, and automatic reset — minimizing operator intervention and improving test repeatability
- Measures burning mass loss rate and flaming burning time — the two key performance parameters for flame retardant wood qualification

THEORY & METHOD

Theory and Method

The wood pile burning test subjects a flame retardant-treated wood specimen (thickness > 20 mm) to a controlled flame from the adjustable burner under specified burning conditions. The rotameter precisely controls the burning gas flow rate to

maintain the standard-specified flame characteristics throughout the test. The burner body is adjustable up and down to position the flame at the correct height relative to the wood pile specimen, accommodating the range of specimen dimensions encountered in structural and engineering wood applications.

The digital timer initiates automatically at ignition and records the flaming burning time — the duration for which visible flaming combustion is sustained after the ignition source is withdrawn. The automatic reset function returns all timer and control parameters to their initial state at the end of each test cycle, minimizing inter-test setup time and reducing operator error. Both the burning mass loss rate (determined by weighing the specimen before and after the test) and the flaming burning time are used to classify the effectiveness of the flame retardant impregnation treatment against the acceptance criteria of the applicable standard.

TECHNICAL SPECIFICATIONS

Flame Retardant Wood Pile Method Tester — ToronFT™ FR-200WBT

Technical Specifications

Parameter	Specification
Model	ToronFT™ FR-200WBT
Test Method	Wood pile method
Applicable Wood Thickness	> 20 mm
Applicable Products	Flame retardant-impregnated wood for production and engineering projects
Measured Parameters	Burning mass loss rate, flaming burning time
Burner Height Adjustment	Adjustable up and down
Timer	Digital (automatic)

Parameter	Specification
Gas Flow Control	Rotameter (adjustable)
Automation	Automatic ignition, automatic timing, automatic reset



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