TORONTECH

TEXTILE HORIZONTAL BURNING TESTER

Textile Horizontal Burning Tester – ToronFT™ TB-H

ToronFT™ TB-H Textile Horizontal Burning Tester is a precision laboratory instrument designed for measuring the horizontal burning performance of various types of textiles, expressed in terms of flame spread rate. Horizontal burning performance testing is an important method for characterizing the flammability of interior textile products such as automotive upholstery, transportation seating, and interior furnishing fabrics — where the specimen is tested in the horizontal orientation representative of its end-use position.

The ToronFT™ TB-H features a high-voltage electronic ignition system, a precision flame height regulating valve, and a two-part design consisting of a separate test box and burning box for flexible, standardized horizontal burning test configurations. It is suitable for evaluating a broad range of woven, knitted, and nonwoven textile materials in horizontal burning orientation.

APPLICATIONS

Textile Horizontal Burning Tester – ToronFT™ TB-H Applications

The ToronFT™ TB-H is applicable for horizontal burning performance testing of:

- Automotive interior textiles including seat upholstery, headliners, door panel fabrics, and carpet for horizontal burning rate compliance
- Interior transportation textiles for aircraft, rail, and marine applications requiring horizontal burning performance characterization
- Home furnishing fabrics including upholstery, carpet, and floor covering textiles for horizontal burning rate assessment
- Industrial textiles and technical fabrics requiring horizontal burning performance data for product safety certification

- Decorative and interior finishing textiles for public buildings and commercial interiors requiring horizontal burning compliance
- Research and development of flame-retardant textile finishes and constructions — using horizontal burning rate data to quantify fire performance improvements

TORONTECH
Ignition Time
Burning Time
Start
Stop
Reset
Ignition
Gas Regulation
Power
ToronFT™ TB-H - Textile Horizontal Burning Tester

Standards

The ToronFT™ TB-H is designed to comply with the following international standards for horizontal textile burning performance testing:

- ISO 3795: Road vehicles, and tractors and machinery for agriculture and forestry: Determination of burning behaviour of interior materials
- FMVSS 302: Federal Motor Vehicle Safety Standard: Flammability of Interior Materials
- ASTM D5132: Standard Test Method for Horizontal Burning Rate of Polymeric Materials Used in Occupant Compartments of Motor Vehicles
- SAE J369: Flammability of Polymeric Interior Materials — Horizontal Test Method

FEATURES

Textile Horizontal Burning Tester – ToronFT™ TB-H Key Features

- Two-part instrument design — separate test box and burning box — provides a modular, flexible configuration for horizontal burning performance testing of a wide range of textile specimen sizes and types
- High-voltage electronic ignition system ensures consistent, reproducible gas burner ignition for reliable and standardized horizontal burning test initiation
- Precision flame height regulating valve allows accurate adjustment of the burner flame height to the exact dimension required by ISO 3795, FMVSS 302, and other horizontal burning test standards
- Mercury thermometer inside the burning box provides direct monitoring of the ambient temperature conditions throughout the horizontal burning performance test
- Power supply of 220V +10%, 50 Hz at 500W provides robust, reliable power for all test operations including ignition and instrumentation

- Suitable for evaluating various types of textiles — woven, knitted, nonwoven, coated, and laminated fabrics — in the horizontal burning orientation across a wide range of textile material categories
- Complies with ISO 3795, FMVSS 302, and ASTM D5132, providing horizontal burning performance test results recognized by automotive OEMs, transportation authorities, and certification bodies in North America and globally

THEORY & METHOD

Theory and Method

Horizontal burning performance testing measures the rate at which a flame propagates across the surface of a horizontally positioned textile specimen after ignition by a standardized gas flame. The flame spread rate (in mm/minute or inches/minute) provides a quantitative measure of the horizontal burning behavior of the textile — materials with lower flame spread rates are considered less flammable and safer for use in enclosed environments such as vehicle interiors.

In the ToronFT™ TB-H, the textile specimen is clamped horizontally in the test box and exposed to the gas burner flame for the standardized ignition duration. After the ignition source is removed, the flame front progress across the specimen is timed between reference marks, and the horizontal burning rate is calculated. The mercury thermometer inside the box monitors the ambient temperature during the horizontal burning test. The precision regulating valve controls the flame height to the exact dimension specified by the applicable standard. The high-voltage electronic ignition system provides clean, reproducible ignition of the gas burner for consistent horizontal burning test initiation.

TECHNICAL SPECIFICATIONS

Textile Horizontal Burning Tester – ToronFT™ TB-H Technical Specifications

Parameter	Specification
Product Name	Textile Horizontal Burning Tester — ToronFT™ TB-H
Test Method	Horizontal burning; flame spread rate measurement
Instrument Configuration	Two-part: test box + burning box
Temperature Measurement	Mercury thermometer (inside box)
Flame Height Control	Precision regulating valve
Ignition System	High-voltage electronic ignition
Voltage	220V +10%, 50 Hz; 500 W (110V is also available)
Compliance Standards	ISO 3795; FMVSS 302; ASTM D5132; SAE J369

For more information, pricing, or to request a quotation, please contact ToronFT. Specifications are subject to change without prior notice.

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