

TEXTILE BURNING PERFORMANCE TESTER



Textile Burning Performance Tester - ToronFT™ TB-100

ToronFT™ TB-100 Textile Burning Performance Tester is a precision laboratory instrument designed for evaluating the burning performance and flammability characteristics of textiles using both Method A and Method B test procedures at a 45° specimen orientation. Textile burning performance is a critical safety and regulatory parameter for apparel, home textiles, industrial fabrics, and protective clothing — directly impacting the risk of burn injuries to wearers and users in fire and ignition scenarios.

The ToronFT™ TB-100 features a robust SUS304 stainless steel burning test chamber (330 mm deep × 360 mm wide × 600 mm high), a stainless steel test clamp, and high-voltage electronic ignition — providing a durable, reproducible, and internationally compliant textile burning performance test platform. It is suitable for qualifying textiles for apparel, home furnishings, children's sleepwear, and industrial applications in North American and global markets.

APPLICATIONS

Textile Burning Performance Tester - ToronFT™ TB-100 Applications

The ToronFT™ TB-100 is applicable for textile burning performance testing of:

- Method A — Determination of damaged area and damaged length of textiles at 45°: applicable to apparel fabrics, decorative textiles, and general-purpose woven and knitted fabrics
- Method B — Determination of the number of times textiles are exposed to flames when heated and melted to a specified length at 45°: applicable to thermoplastic and melt-drip prone textile materials
- Children's sleepwear fabrics and garments requiring flammability compliance per CPSC regulations and applicable textile burning performance standards
- Apparel fabrics, workwear, and protective clothing textiles requiring 45° textile burning performance characterization

- Home furnishing textiles including curtains, drapes, and upholstery fabrics for burning performance qualification
- Industrial and technical textiles requiring textile burning performance data for product development and certification



Standards

The ToronFT™ TB-100 is designed to comply with the following international standards for textile burning performance testing:

- ASTM D1230: Standard Test Method for Flammability of Apparel Textiles
- 16 CFR Part 1610: Standard for the Flammability of Clothing Textiles (U.S. CPSC)
- ISO 6941: Textile fabrics: Measurement of flame spread properties of vertically oriented specimens
- EN ISO 15025: Protective clothing: Protection against flame — Method of test for limited flame spread

FEATURES

Textile Burning Performance Tester - ToronFT™ TB-100 Key Features

- Supports both Method A (damaged area and damaged length at 45°) and Method B (number of exposures to specified melt length at 45°) textile burning performance test protocols — covering both standard and thermoplastic textile material types
- Large SUS304 stainless steel burning test chamber (330 mm deep × 360 mm wide × 600 mm high) with a front observation window and ventilation holes on the top and sides provides a durable, hygienic, and corrosion-resistant enclosure for accurate textile burning performance testing
- Stainless steel test clamp securely holds textile specimens at the specified 45° orientation for consistent, reproducible textile burning performance test geometry
- Power supply voltage of 220V +10%, 50 Hz at 500W provides the power for ignition and test chamber conditioning
- Front observation window enables direct visual monitoring of textile burning behavior and flame spread throughout the burning performance test
- Top and side ventilation holes in the burning test chamber maintain the controlled airflow conditions specified by ASTM D1230 and 16 CFR Part 1610 for standardized textile burning performance testing

- Complies with ASTM D1230 and 16 CFR Part 1610, providing textile burning performance test results recognized by U.S. CPSC, Canadian regulatory authorities, and international textile certification bodies

THEORY & METHOD

Theory and Method

The 45° textile burning performance test evaluates the ease of ignition and rate of flame spread of a textile fabric specimen oriented at a 45° angle to the horizontal. At this angle, the specimen geometry promotes upward flame propagation across the textile surface — simulating the orientation of fabric during wear and providing a sensitive measure of textile burning performance and flammability hazard.

In Method A, the ToronFT™ TB-100 applies a standardized flame to the lower edge of the specimen for a defined exposure time, then measures the damaged area and damaged length along the specimen after burning — quantifying the extent of textile fabric destruction. In Method B, the flame is applied repeatedly until the specimen melts to a specified length, and the number of flame exposures required is recorded — characterizing the resistance of thermoplastic textiles to progressive burning under repeated flame contact. The SUS304 stainless steel burning test chamber with observation window, ventilation holes on the top and sides, provides the standardized enclosure and airflow conditions required for repeatable and accurate textile burning performance results.

TECHNICAL SPECIFICATIONS

Textile Burning Performance Tester - ToronFT™ TB-100 Technical Specifications

Parameter	Specification
Product Name	Textile Burning Performance Tester — ToronFT™ TB-100
Test Methods	Method A (damaged area/length at 45°); Method B (flame exposures to melt length at 45°)
Specimen Orientation	45°
Voltage	220V +10%, 50 Hz; 500 W (110V is also available)
Burning Test Chamber Dimensions (D×W×H)	330 mm × 360 mm × 600 mm
Chamber Material	SUS304 stainless steel
Observation Window	Front face
Ventilation	Top and sides of chamber
Test Clamp	Stainless steel
Compliance Standards	ASTM D1230; 16 CFR Part 1610; ISO 6941

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



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