

STANDARD VERTICAL BURNING TESTER



Standard Vertical Burning Tester - ToronFT™ VB-T

ToronFT™ VB-T Standard Vertical Burning Tester is a laboratory instrument built to evaluate the flammability of textile fabrics and assembled textile components by applying a small flame to either the face surface or the bottom edge of vertically oriented specimens. Designed for use with a wide range of textile materials and fabric assemblies, this tester provides critical data on ease of ignition, flame spread rate, afterflame time, and char formation — all essential parameters for textile burning compliance assessments. With a 0.5-cubic-meter stainless steel test box, an integrated observation window, and a top-mounted smoke exhaust fan, the ToronFT™ VB-T delivers a controlled, repeatable, and safe test environment for both routine quality assurance and regulatory compliance work.

APPLICATIONS

Standard Vertical Burning Tester - ToronFT™ VB-T Applications

- Vertical burning performance testing of textile fabrics and fabric assemblies
- Evaluation of flame spread on the surface or bottom edge of vertically oriented specimens
- Compliance testing for apparel, protective clothing, and technical textile materials
- Quality assurance for textile manufacturers supplying the North American and international markets
- Research and development of flame-resistant fabrics and composite textile assemblies



Standards

- BS 5438: Methods of Test for Flammability of Textile Fabrics When Subjected to a Small Igniting Flame Applied to the Face or Bottom Edge of Vertically Oriented Specimens
- ASTM D6413: Standard Test Method for Flame Resistance of Textiles (Vertical Test)
- ISO 6941: Textile Fabrics: Burning Behaviour – Measurement of Flame Spread Properties of Vertically Oriented Specimens

FEATURES

Standard Vertical Burning Tester - ToronFT™ VB-T Key Features

- Suitable for burning performance testing of textile fabrics and fabric component assemblies
- Applies a small flame to the surface or bottom edge of vertically oriented specimens
- Test box volume of 0.5m³, constructed from durable stainless steel
- Observation window on the front panel for visual monitoring during the textile burning test
- Top-mounted smoke exhaust fan to remove combustion gases after each test cycle
- Chamber is closed during the test to prevent airflow interference; smoke exhausted after test completion
- Adjustable support frame to maintain the defined geometric relationship between igniter and specimen
- Flame height adjustable between 10mm and 60mm to accommodate various test requirements

THEORY & METHOD

Theory and Method

The ToronFT™ VB-T evaluates textile burning performance by mounting the specimen vertically in a support frame within the enclosed stainless steel test box. A small calibrated flame, with a height adjustable between 10mm and 60mm, is applied to either the fabric face or the bottom edge of the specimen, in accordance with the applicable test method. The support frame maintains the required geometric relationship between the igniter and the specimen throughout the test. Once the flame application period is complete, the test chamber is sealed and the smoke exhaust fan activates to clear combustion gases before the specimen is assessed.

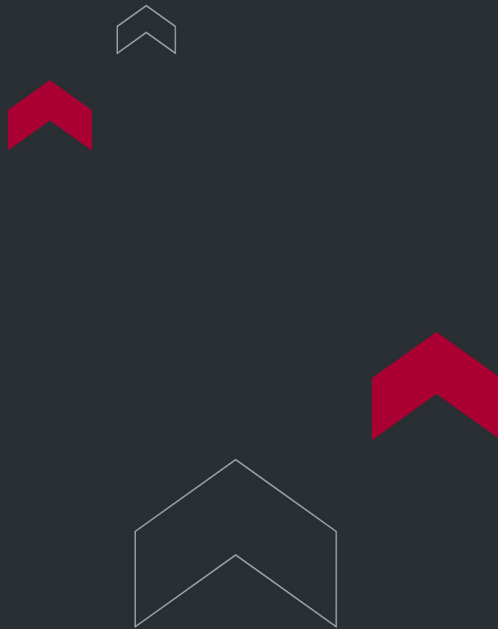
Key parameters recorded include time to ignition, afterflame duration, afterglow time, and char length. All tests are conducted in the controlled environment of the 0.5m³ chamber, minimizing the influence of ambient airflow on the textile burning outcome.

TECHNICAL SPECIFICATIONS

Standard Vertical Burning Tester - ToronFT™ VB-T Technical Specifications

Parameter	Specification
Test Box Volume	0.5m³
Test Box Material	Stainless steel
Observation Window	Front panel glass observation window
Exhaust System	Top-mounted smoke exhaust fan
Chamber Operation	Closed during test; exhausted after test completion
Support Frame	Adjustable; maintains igniter-to-specimen geometric relationship
Flame Height	10 – 60mm (adjustable)

Parameter	Specification
Flame Application	Surface or bottom edge of vertically oriented specimen
Applicable Standard	BS 5438



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