



TORONTECH

CARPET 45° BURNING TESTER



Carpet 45° Burning Tester - ToronFT™ CB-45

ToronFT™ CB-45 Carpet 45° Burning Tester is a specialized instrument designed to assess the carpet burning performance and flame retardancy of carpet and floor covering materials. Specifically engineered for 45-degree angle flame exposure testing, this tester evaluates the heat shrinkage resistance and flame spread characteristics of carpet specimens under controlled conditions.

The instrument features adjustable gas pressure, burning angle, and flame height, enabling comprehensive assessment of a wide range of carpet types and constructions in compliance with international standards.

APPLICATIONS

Carpet 45° Burning Tester - ToronFT™ CB-45 Applications

- Flame retardancy and carpet burning performance testing of floor coverings
- Heat shrinkage resistance evaluation for carpets and rugs
- Quality control for residential and commercial carpet manufacturers
- Compliance verification for carpet materials used in public spaces and transportation
- Research and development of fire-resistant flooring solutions



Standards

- ASTM D2859: Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials
- ISO 6925: Textile Floor Coverings: Burning Behaviour; Tablet Test at Ambient Temperature
- BS 6307: Method of Determination of the Effects of a Small Source of Ignition on Textile Floor Coverings

FEATURES

Carpet 45° Burning Tester - ToronFT™ CB-45 Key Features

- Designed for carpet burning performance testing at a 45-degree flame exposure angle
- Single test station configuration for focused, precise carpet evaluation
- Adjustable gas pressure for fine control of flame intensity
- Adjustable burning angle to accommodate different test methods
- Adjustable flame height to meet varying standard requirements
- Compatible with butane or liquefied petroleum gas supply
- Programmable flame application time for flexible test protocols
- Brass burner manufactured in-house for consistent quality and durability
- High-voltage electronic ignition for reliable, repeatable flame initiation

THEORY & METHOD

Theory and Method

The ToronFT™ CB-45 places the carpet specimen at a 45-degree angle relative to the burner, replicating the inclined surface conditions that can accelerate flame spread in real-world flooring installations. A calibrated gas flame from butane or liquefied petroleum gas is applied to the specimen surface for a preset application time, which can be adjusted to match the requirements of the applicable test standard.

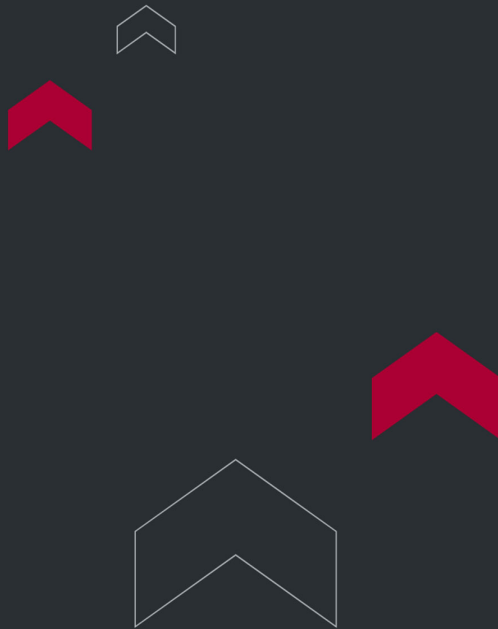
The instrument measures the extent of burning, charring, or discoloration caused by flame contact, providing quantitative data on flame retardancy and heat shrinkage resistance. The high-voltage electronic ignition system ensures repeatable, spark-free ignition of the gas burner for consistent test results.

TECHNICAL SPECIFICATIONS

Carpet 45° Burning Tester - ToronFT™ CB-45 Technical Specifications

Component / Parameter	Specification Details
General Information	
Test Stations	1 station
Gas Source	Butane or liquefied petroleum gas
Adjustable Parameters	Gas pressure, burning angle, flame height, and programmable flame application time
Test Chamber	
Internal Dimensions (H×W×D)	520 mm × 375 mm × 220 mm
Material	Stainless Steel
Ventilation (Top)	12 vents (Ø12.7 mm each)
Observation Window	Glass front door
Combustion & Gas System	

Component / Parameter	Specification Details
Burner Specifications	- Material: Brass (in-house manufactured) - Type: 18-gauge needle (compliant with ASTM requirements)
Ignition System	High-voltage electronic automatic ignition
Flame Control	Needle valve control
Flame Measurement	Scale accuracy of 1 mm
Gas Control & Measurement	- Flow Meter: Rotameter - Pressure Gauge: 0–0.25 MPa (Accuracy class 0.5)
Control System	
Automation	Automatic ignition and timing control
Combustion Timing	Range: 0–99.99 s (Resolution: 0.01 s)
After flame Timing	Range: 0–99.99 s (Resolution: 0.01 s)
Sample Base & Support	Compliant with ASTM standards
Sample Clips	5 pieces (Stainless steel)
Brush Apparatus	- Bristle Material: Nylon (Diameter: 0.41 mm; Length: 19 mm) - Clump Details: 20 bristles per clump - Arrangement: 4 clumps per 25 mm (two rows, staggered) - Brush Pressure: 75 g
Accessories Included	Standard filter paper (Lens Paper): 1 pack



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