TORONTECH

SUTURE AND FLAME CONTACT TESTER

Suture and Flame Contact Tester – ToronFT™ SFC

ToronFT™ SFC Suture and Flame Contact Tester is a precision laboratory instrument designed to evaluate the flame-retardant performance of protective clothing worn by workers in environments with flammable materials or fire hazards.

This specialized tester exposes textile specimens to direct flame contact and suture ignition scenarios, making it an essential tool for quality assurance in occupational safety apparel. By simulating real-world flame and suture contact conditions, the instrument provides manufacturers, testing laboratories, and safety regulators with reliable data on the effectiveness of flame-resistant treatments.

APPLICATIONS

Suture and Flame Contact Tester – ToronFT™ SFC Applications

- Flame-retardant workwear and protective clothing manufacturers
- Occupational health and safety testing laboratories
- Textile research institutes evaluating suture and flame resistance
- Regulatory compliance testing for industrial protective garments
- Quality control departments in the apparel and safety equipment industry


TORONTECH
FLAME TIME
AFTERFLAME TIME
START
STOP
POWER
IGNITE
FLOWMETER
ADJUST
ToronFT™ SFC
Suture and Flame Contact Tester

Standards

- ASTM F1506: Standard Performance Specification for Flame Resistant and Arc Rated Textile Materials for Wearing Apparel
- NFPA 2112: Standard on Flame-Resistant Clothing for Protection of Industrial Personnel Against Short-Duration Thermal Exposures from Fire
- ISO 15025: Protective Clothing: Protection Against Flame – Method of Test for Limited Flame Spread
- EN ISO 11612: Protective Clothing for Workers Exposed to Heat and Flame

FEATURES

Suture and Flame Contact Tester – ToronFT™ SFC Key Features

- Suitable for testing flame-retardant clothing in environments with flammable and fire hazards
- Electronic ignition system for consistent, repeatable flame initiation
- Adjustable gas flow rate from 0 to 1,000 mL/min for precise flame control
- Compatible with multiple gas sources: industrial propane, butane, and liquefied petroleum gas
- Digital timing display for accurate recording of flame contact duration
- Operates over a wide ambient temperature range from room temperature to 40°C
- Maintains test integrity at relative humidity levels below 75%
- Durable stainless steel construction for long-term laboratory use
- Working voltage of 220V ±10V for stable power supply performance

THEORY & METHOD

Theory and Method

The ToronFT™ SFC operates on the principle of controlled flame contact assessment. A standardized gas flame — generated from industrial propane, butane, or liquefied petroleum gas — is applied to the surface of the textile specimen at a defined flow rate and temperature. The instrument records ignition response, flame spread behavior, and after-flame or afterglow characteristics at the suture points and fabric surface.

The electronic ignition system ensures precise and repeatable flame initiation, while the digital timing display logs test duration with high accuracy. The controlled ambient temperature and relative humidity settings replicate the defined test environment required by international standards, ensuring consistent and reproducible results across all flame and suture contact evaluations.

TECHNICAL SPECIFICATIONS

Suture and Flame Contact Tester – ToronFT™ SFC Technical Specifications

Parameter	Specification
Ambient Temperature	Room temperature to 40°C
Working Voltage	220V ±10V (110V is also available)
Gas Source	Industrial propane, butane, or liquefied petroleum gas
Ignition Type	Electronic ignition
Relative Humidity	< 75%
Gas Flow Rate	0 – 1,000 mL/min
Purity	295%

Parameter	Specification
Display	Timing digital display

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