TORONTECH


# GYPSUM BOARD FIRE STABILITY TESTER

# Gypsum Board Fire Stability Tester — ToronFT™ GB-FSB

ToronFT™ GB-FSB Gypsum Board Fire Stability Tester is a precision fire stability testing instrument designed specifically to evaluate the thermal stability performance of gypsum board when exposed to fire conditions. The test measures the time elapsed from the initial exposure of the gypsum board specimen to the open flame until the specimen ruptures — providing a direct, quantitative measure of the fire stability and structural integrity of gypsum board under fire conditions.

The gypsum board fire stability burning tester features a SUS304 stainless steel box body precision-machined by CNC machine tools, a rotameter-controlled burning gas flow system, and dual burners with air adjustment holes that allow the flame length to be easily adjusted within the 20–100 mm range — providing the controlled, repeatable flame exposure conditions required for reliable gypsum board fire stability qualification.

## APPLICATIONS

# Gypsum Board Fire Stability Tester — ToronFT™ GB-FSB Applications

- Gypsum board manufacturers: thermal stability and fire stability qualification for product certification and building code compliance
- Third-party fire testing and certification laboratories: gypsum board fire stability burning testing
- Drywall system manufacturers: evaluation of gypsum board fire stability in complete wall and ceiling assembly configurations
- R&D departments: evaluation of gypsum formulations, additives, and board constructions for improved fire stability performance
- Quality assurance departments: incoming inspection and production-lot fire stability sampling for gypsum board products


TORONTECH
ToronFT™ GB-FSB
Gypsum Board Fire Stability Tester
Flowmeter
Gas Pressure
Time Display
Start
Timer
Ignition
Timer Setting
Stop
Alarm
Power

## FEATURES

# Gypsum Board Fire Stability Tester — ToronFT™ GB-FSB Key Features

- Designed specifically for gypsum board thermal fire stability testing — measures time from fire exposure to specimen rupture
- Box body material: SUS304 stainless steel — precision-machined by CNC machine tools for dimensional accuracy, corrosion resistance, and long service life
- Rotameter-controlled burning gas flow — accurate, repeatable gas flow adjustment for consistent flame conditions
- Dual burner design with air adjustment holes — independent flame length control for each burner
- Flame length adjustment range: 20–100 mm — accommodating any standard-specified flame length requirement
- Compact, self-contained instrument for efficient laboratory integration
- Durable SUS304 stainless steel construction for sustained use in production quality control and certification environments

## THEORY & METHOD

# Theory and Method

The gypsum board fire stability burning test evaluates the time that a gypsum board specimen can withstand direct flame exposure before structural rupture occurs. The specimen is mounted in the test position within the SUS304 stainless steel test enclosure, and the dual burners are ignited and adjusted to the specified flame length using the rotameter gas flow control and air adjustment holes. The timing starts from the moment the specimen is exposed to the fire until rupture is detected.

Gypsum boards are inherently fire-resistant due to the chemically bound water (calcium sulfate dihydrate) within the gypsum core, which must be driven off before the board substrate can reach ignition temperature. The fire stability test measures how effectively the gypsum chemistry and board construction resist this dehydration process under direct flame — a longer time to rupture indicates superior fire stability performance. The adjustable flame length (20–100 mm) allows the test to be conducted at the flame intensity specified by the applicable standard.

## TECHNICAL SPECIFICATIONS

# Gypsum Board Fire Stability Tester — ToronFT™ GB-FSB Technical Specifications

| Parameter | Specification |
|---|---|
| Model | ToronFT™ GB-FSB |
| Box Body Material | SUS304 stainless steel (CNC-machined) |
| Number of Burners | 2 (dual burners with air adjustment holes) |
| Gas Flow Control | Rotameter (adjustable) |
| Flame Length Adjustment Range | 20 – 100 mm |
| Test Measurement | Time from fire exposure to gypsum board specimen rupture |

TORONTECH.com

TORONTECH


**Torontech Inc.**
251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

**Torontech, LLC**
601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

**Torontech ME FZE**
Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE

Phone: +971 488 19252
Email: me@torontech.com


USA | Canada | EU | UAE | GCC | KSA | India | Africa | Latin America | Asia