



FIRE TESTING EQUIPMENT FOR TRANSPORTATION

Fire Testing Equipment for Transportation

The fire safety of materials used in vehicles, aircraft, and rail systems is among the most stringently regulated areas of product testing worldwide. Fires in enclosed transportation environments — aircraft cabins, railway carriages, automobile interiors, and underground transit systems — present acute life-safety risks due to confined spaces, high passenger density, and limited evacuation options. Every non-metallic material used in these environments must be tested and certified for flammability, flame spread, heat release, and smoke generation before it can be approved for use.

The Torontech ToronFT™ Fire Testing Equipment for Transportation system provides a comprehensive suite of 10 specialist apparatus addressing the fire performance test requirements of all major transportation sectors — automotive, commercial aviation, railway, and mass transit. From standard automotive interior horizontal burn testing (FMVSS 302 / ISO 3795) and railway material flame spread evaluation (EN 45545-2) through to aircraft cabin interior testing (FAR 25.853), aviation wire and cable burn testing, and the unique Subway/High-Speed Rail Wind Tunnel Test Bench, the ToronFT™ range equips OEM suppliers, Tier 1 manufacturers, and certification laboratories with the instruments needed to qualify materials across the full scope of transportation regulatory requirements.

APPLICATIONS

Applications & Industries

The ToronFT™ Fire Testing Equipment for Transportation is specified by organisations across the following sectors:

- Automotive OEMs & Tier 1 Interior Material Suppliers: FMVSS 302 / ISO 3795 compliance testing of headliners, seat fabrics, carpets, trim panels, and under-bonnet materials
- Railway Vehicle Manufacturers & Interior Fit-Out Suppliers: EN 45545-2 flame spread and smoke density testing for rail vehicle seating, flooring, wall panels, and cable systems
- Commercial Aircraft Manufacturers & Cabin Interior Suppliers: FAA/EASA-compliant testing of cabin panels, seats, carpets, insulation blankets, and structural non-metallics
- Aviation Wire, Cable & Fluid System Manufacturers: burn testing of wire bundles, harnesses, hydraulic hoses, and rigid fluid line assemblies to aviation airworthiness standards
- Urban Transit & High-Speed Rail Authorities: material approval testing for new rolling stock and refurbishment programs, including wind tunnel simulation for underground and high-speed route conditions
- Third-Party Testing & Homologation Laboratories: independent material evaluation for OEM supplier qualification and regulatory type-approval submissions across transport sectors
- Defence & Specialist Vehicle Manufacturers: fire performance testing for military vehicle interiors, special purpose vehicle systems, and naval vessel non-metallic materials

FEATURES

Why Choose the ToronFT™ Fire Testing Equipment for Transportation?

Our Advantage	What That Means for You
All Transport Modes, One Supplier	The ToronFT™ Transportation range uniquely addresses fire testing requirements across all major transport sectors — automotive, railway, aviation, and mass transit — within a single, consistent instrument family. Laboratories serving multi-sector OEM and Tier 1 customers can consolidate procurement and align test procedures across programs.
Regulatory Standard Alignment	Apparatus are designed to address the test methods required by FMVSS 302 / ISO 3795 (automotive), EN 45545-2 (railway), FAR 25.853 and FAR 25.855 (commercial aviation), and equivalent national transportation material flammability standards — ensuring that test results are accepted by homologation and certification authorities worldwide.

Our Advantage	What That Means for You
Rail-Specific Wind Tunnel Capability	The Subway/High-Speed Rail Wind Tunnel Test Bench is a rare and specialist capability that simulates the elevated airflow conditions experienced by materials in underground and high-speed rail tunnels — providing flame spread data that static tests cannot capture and that is increasingly required by rail operators and certification bodies.
Aviation Precision Testing	Aircraft material testing demands the highest levels of precision and specimen preparation control. The Cabin Interior Non-Metallic Material Tester, Aviation Wire and Cable Burning Tester, and Aviation Hose and Hard Pipe Components Tester are configured to address the exacting requirements of FAA, EASA, and equivalent airworthiness authority test standards.
Smoke Characterisation for Safety	The Smoke Density Tester addresses the growing emphasis on smoke opacity and visibility in transportation fire safety standards — particularly for enclosed environments such as aircraft cabins and rail vehicle interiors — providing the specific optical density data required for material classification.
Torontech Transportation Expertise	Transportation fire testing is a highly regulated field where test procedure adherence and equipment calibration are subject to close scrutiny. Torontech's ToronFT™ applications team provides guidance on test method implementation, specimen preparation to transportation material standards, and calibration documentation — supporting laboratory accreditation and OEM approval programs.



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