



# Building & Construction Product Testing - Our Top 10 Questions Answered

Why do some buildings last for decades while others start showing cracks far too soon? In many cases, it comes down to how well building products and materials are tested and verified before use. Whether you work in project management, inspections, design, or on-site operations, thorough building product testing helps prevent failures, delays, and costly rework.

A well-known example is the 1971 collapse of a building under construction at 2000 Commonwealth Avenue in Boston. The structure failed when materials and temporary supports were not properly tested and verified during construction, leading to a sudden collapse that resulted in four fatalities and many injuries. The incident is still referenced today because it shows how quickly serious failures can occur when construction practices are not adequately checked.

This article begins with our Top 10 Questions Answered series. Each month, we will highlight a new topic and the

questions we hear most often from clients and project teams across the building and construction industry.

## Top 10 Common Questions and Answers About Building and Construction Product Testing

### 1. Do building products need testing for code compliance in North America?

Most building products sold or specified in North America require testing to demonstrate compliance with building codes, referenced standards, or project specifications. Products used in exterior walls, roofs, doors, glazing, insulation, and structural assemblies must typically demonstrate documented performance before acceptance by the authorities having jurisdiction.

### 2. Which building product testing standards apply in North America?

Applicable standards depend on product type, installation method, and intended use. Common requirements include standards from the American Society for Testing and Materials (ASTM), Underwriters Laboratories (UL), the National Fire Protection Association (NFPA), the International Code Council (ICC), Canadian Standards Association (CSA), and standards from the Fenestration Glazing Industry Alliance (FGIA, formerly AAMA) all of

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**“Buildings rarely fail without warning. Most problems trace back to materials that were not properly tested, verified or coordinated before installation.”**

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which are used across U.S. and Canadian construction markets. A single product may fall under multiple standards depending on its specifications or installation requirements.

### 3. When should manufacturers start building product testing?

Testing should begin during design development, not after production tooling is finalized. Early testing helps confirm applicable standards, identify detailing issues, and reduce the risk of redesign or retesting that can delay approvals or market entry.

### 4. What is the difference between product testing and product certification?

Building product testing measures performance against a defined standard. Product certification includes sampling, testing, plus third-party evaluation, listing, and ongoing compliance oversight. Many building codes, state approvals, and project specifications in North America require certification rather than standalone test reports.

### 5. How long does building product testing take?

Timelines vary based on the standard and test method. Fire resistance testing, air and water penetration testing, structural load testing, acoustical testing, and durability testing each follow different schedules. Some tests are completed in days, while others require weeks or longer due to conditioning or cyclic requirements.

### 6. How many samples are required for building product testing?

Sample requirements depend on the test method and whether testing is destructive. Curtain wall systems, insulation products, roofing assemblies, hardware, and fasteners often require multiple specimens. Confirming sample quantities early helps avoid delays and added cost.

### 7. Why do building products fail testing?

Most building product failures stem from quality control issues. Common issues include incorrect mounting conditions, material substitutions that differ from submitted documentation,

incomplete installation instructions, or misunderstandings of pass/fail criteria defined by the standard.

### 8. Can one test report be used for multiple U.S. or Canadian markets?

Sometimes a single test report can be used across multiple U.S. or Canadian markets. Certain standards overlap across jurisdictions, but many states, provinces, or local authorities apply unique requirements. A coordinated testing plan can reduce duplication when similarities exist, but assumptions should be verified before testing begins. A listed or certified product typically will cover all of North America.

### 9. What documentation is required for building product testing and certification?

Typical documentation includes product drawings, material specifications, installation instructions, and intended-use descriptions. Certification programs may also require quality manuals, production controls, and factory inspections to demonstrate ongoing compliance.

### 10. How does Intertek support building product testing in North America?

Intertek provides testing, inspection, and certification services for building products used across the U.S. and Canadian construction markets, including cladding, doors and frames, glazing, wall systems, roofing, insulation, hardware, fasteners, storm shelters, and weather barriers.

To learn more about Intertek's building and construction testing services, [click here](#).

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