

# Independent Third Party Testing and Certification of Building Products

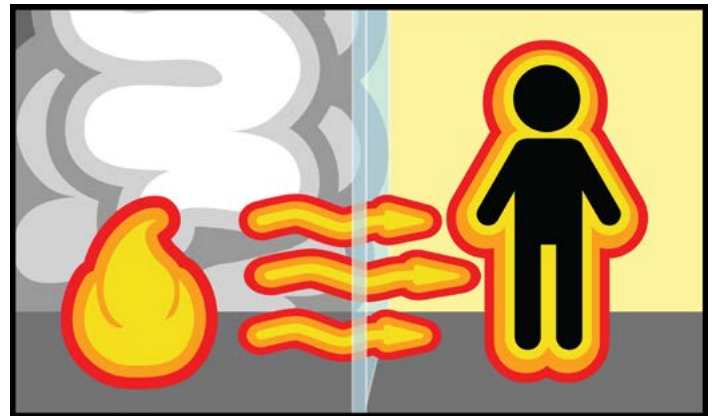
Nona Peterson - 10-2-2023

## What is Independent Third Party Testing for Products?

To assure that building products are meeting performance and safety standards, many are tested or evaluated by independent third party organizations also known as **Nationally Recognized Testing Laboratories (NRTL)** such as Intertek, UL Solutions (UL), FM Approvals (FM) and QAI Laboratories (QAI). Those organizations among others, are accredited by **International Accreditation Service (IAS)** which evaluates and recognizes that testing methods are based on recognized national and international standards and building codes.

## Why Do I Need Third Party Testing?

Selecting products that have a certification, assures both you and code officials that the product will perform to the standards for which it was designed and tested. An example is a fire-rated floor door which is designed to withstand heat for a specified period when exposed to fire. When installed in a fire-rated horizontal surface, the door will maintain the integrity of the floor during a fire, isolating the fire on one side, and protecting occupants in adjacent rooms from heat. Another example is fire-rated glass which is tested to standards for fire-door assemblies to compartmentalize smoke and flames.



Fire-Protective Glass  
Compartmentalizes Smoke and Flames

## What is the Difference of Certification Between these Third Party Organizations?

When it comes to product certification, there is no difference. If a product is tested to the industry standards for its type, all of these accredited companies test to the same standards. After the product passes the testing, then the NRTL will work with the manufacturer to properly label the product per industry standards, and visit their production facility periodically, to assure that the product is being fabricated and labeled properly.

## How Will I Know if a Product has a Third Party Certification?

Manufacturers who have their products tested and certified do so to comply with building code standards. Product documentation will have information about certification, so that it is easy to see what standards it meets, and products can be compared with each other. In addition, all fire-rated products and some in other categories are required to be clearly labelled. The label may be inside the product, on the back, or may be stamped or etched into the product for easy identification.

## Example of the Process for Certifying a Fire-Rated Floor Door

<p><b>Identify the International Building Code (IBC) that applies to that product type. Fire-rating of floor/ceiling assembly determines the rating of the product.</b></p>	<p><b>Test standards are specified by building code. Product is tested in floor assembly or has engineering equivalency evaluation</b></p>	<p><b>After testing is passed, manufacturer receives authorization to manufacture &amp; label.</b></p>	<p><b>Periodic Inspections from NRTL assures that product is being made and labeled correctly</b></p>
<p><b><u>IBC 2018</u></b></p> <p><b>Section 712</b> <i>Vertical Openings</i> 7.12.1.13 Openings—horizontal; shall be tested in accordance with NFPA 288 and shall achieve a fire resistance rating not be less than the assembly being penetrated.</p> <p><b>Section 716</b> <i>Opening Protectives</i> 716.2.6.4 Automatic-closing fire door assemblies shall be self-closing in accordance with NFPA 80.</p>	<p><b><u>TESTING TO NFPA 288</u></b></p> <p>Fire tests of horizontal fire door assemblies installed in horizontal fire resistance-rated assemblies. Measures the ability of the fire door to remain in an opening and resist the passage of flame and heat during a predetermined test exposure such as 1, 2 or 3 hours.</p>	<p><b><u>PRODUCT IS LABELED PER NFPA 80</u></b></p> <p>Standard that regulates the installation and maintenance for fire doors and other opening protectives. Labels shall be approved and permanently affixed at the factory location where fabrication and assembly are performed.</p>	<p><b><u>ANNUAL RECERTIFICATION</u></b></p> <p>Periodic Inspections from NRTL assures that product is being made and labelled correctly.</p>

## The NRTLs that Most Commonly Certify Activar Construction Products, Inc. Product Types

### UL Solutions

UL is a third-party certification company that's been around for over a century. They test and certify products in many building product categories and assist with regulatory and environmental compliance. Accredited by the American National Standards Institute (ANSI), Occupational Health and Safety Administration (OSHA) Standards Council of Canada (SCC) and is accredited to develop Standards for Canada (ULC).

US, Canada and International: <https://www.ul.com/>



### Intertek/ETL

Intertek provides testing, inspecting and product certification. Since 1927, when the Chas Warnock Company was founded to inspect steel products, Intertek has been performance testing building products including acoustical, structural, fire-resistance, hurricane, thermal performance, threat-resistance and weathering. Accredited by the American National Standards Institute (ANSI), Occupational Health and Safety Administration (OSHA) and the Standards Council of Canada (SCC).

US, Canada and International: <https://www.intertek.com/>



### QAI Laboratories

Founded in 1995 by a group of experienced certification and testing experts, QAI evaluates products to show compliance to the appropriate methods both in the lab and field. QAI helps manufacturers plan to meet code requirements and test standards for their products and offers testing and certification of interior and exterior building products in many categories including fire-rating. QAI is accredited by the Occupational Health and Safety Administration (OSHA), Standards Council of Canada (SCC), and is also recognized by the Canadian Construction Materials Centre (CCMC).

US, Canada and International: <https://qai.org/>



### FM Approvals

FM is an international third-party testing and certification company for property loss prevention products. FM was founded in 1886 as Factory Mutual Laboratories. Products in Activar Construction Products categories include specialty fire extinguishers, automatic smoke vents and hose racks/reels. Accredited by Occupational Health and Safety Administration (OSHA), the American National Standards Institute (ANSI) and the Standards Council of Canada (SCC).

US, Canada and International: <https://www.approvalguide.com/>



### Building Code Development and Why It Matters

Building codes have been developed over many years, and draw on experiences such as the Triangle Shirt-waist Factory fire of 1911, to set minimum standards for different types of buildings and their components. As a result of the loss of 146 workers in that fire, codes have been put into place for exit signs, fire sprinklers, fire alarms, doors that swing in the direction of travel, working fire hoses, stairway size restrictions and periodic fire inspections. This has directly led to safer buildings and undoubtedly saved many lives.

Building inspectors rely on accredited products with certification labeling to assure that they conform to applicable standards and that the manufacturer is subject to a program of ongoing factory inspections.