UL

BUILDING MATERIALS
TESTING, CERTIFICATION & TRAINING

Underwriters Laboratories (UL) is a global, independent safety science company with more than a century of expertise in standards development, testing and certification. Our groundbreaking innovations in safety, sustainability, renewable energy and nanotechnology illustrate our continued dedication to promoting safe products and people-friendly living and working environments.

TEST LOCALLY, THINK GLOBALLY

UL is able to offer testing and certification to customers in the global marketplace using staff and resources located across Asia, Europe, the Middle East and North America. Regional testing laboratories and local staff allow customers to work with experienced UL staff to complete projects, meet time to market deadlines and minimize communication difficulties.

The Building Materials Team actively participates in standards development activities regarding UL, ASTM, ISO and European Test Methods for fire resistance, fire containment and roofing products. This participation allows UL's technical staff to provide solutions and insights to help our customers succeed in various markets around the world.
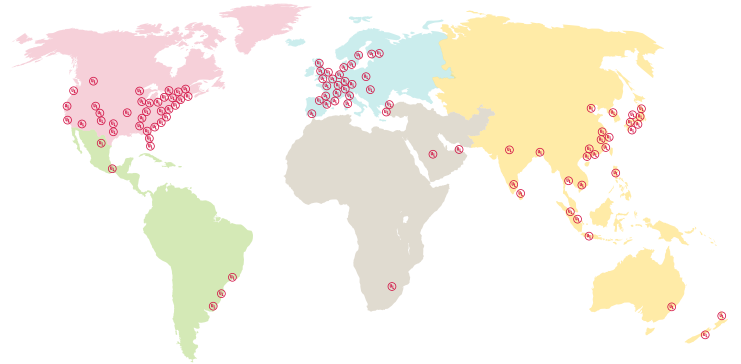
PROMOTING PRODUCT SAFETY

UL's association with fire safety, integrity, quality and performance is globally recognized. Passive fire protection products that carry the UL Mark gain a decisive competitive edge through the instant recognition the Mark provides.

Established in the United States in 1894, UL operates globally, offering a comprehensive range of services that help manufacturers gain the compliance and performance credentials they need to compete in the global marketplace.

UL provides customized services, which range from fire safety testing and certification for manufacturers to training programs for regulatory authorities, building owners, insurance companies and the fire safety community.

PARTNERING WITH UL

Our services support the passive fire protection industry's need for reliable, accurate test results and certifications. The testing process is streamlined to control costs and accelerate time-to-market for our customers without compromising integrity or scientific excellence. In today's fast-moving business environment, UL's passive fire protection team adapts to stay at the forefront of fire safety advancements.

We offer flexible options for testing outside of UL facilities, including witness testing at third-party laboratories or at the manufacturer's facilities. Additionally, to simplify the design and testing process for manufacturers, UL offers customized testing solutions and a sensible system to facilitate product choices and replacements that correlate to the applicable standards.

TESTING AND CERTIFICATION OF BUILDING MATERIALS

UL evaluates a wide range of products for fire resistance and performance including doors, door hardware, roofing products, gypsum board, and more. Fire testing can be conducted with full test capabilities at global UL or partner laboratory locations.

PRODUCT GROUPS

Steel Protection

UL has been testing structural steel columns, beams and horizontal fire resistance assemblies with steel elements since the early 1920s. UL can evaluate modern steel protection methods and materials for use in building construction, hydrocarbon fire exposures, and to determine the impact of manufacturer proposed material changes.

A streamlined path to compliance and global market access with service bundles that include all necessary tests and certifications is also available. UL is an accredited Technical Approval Body (TAB) and a Notified Body to European Construction Products Regulation (CPR) enabling us to assess fire-resistance products to applicable standards and issue European Assessment Documents and CE Certificates where the appropriate technical specifications exist. We can conduct a combined fire resistance test program that includes critical requirements of UL, EN and British (BS) test standards for wider global market acceptance.

Gypsum Board and Acoustical Tiles

UL has been directly involved with the development of fire resistance ratings for gypsum wallboard and ceiling products since their introduction to the market. Nearly a century of product testing made the UL Fire Resistance Directory an invaluable resource for the architectural community.

Global testing facilities with both large and small furnaces are available to test products, including gypsum wallboard, studs and joists, partition panels and ceiling systems. Additionally, UL furthers product development by conducting engineering studies on changes to previously evaluated constructions to assess continued fire-resistive performance.

Roofing Products

UL is backed by more than 100 years of expertise in evaluating roofing materials and systems for weather, fire, wind and environmental requirements. UL engineers work within the industry to develop standards that improve the performance of roofing materials and systems for fire safety and/or property protection. From fire-resistance testing to emerging environmental requirements, UL is a trusted source for all testing and certification.

Dampers

UL helped write many of the industry test standards referenced in building codes. The UL Building Materials team tests the performance of dampers for various safety aspects, including fire resistance, smoke leakage performance, corrosion and cycling.

Doors, Glazing and Hardware

UL offers testing and assessment services for fire doors and fire door hardware to various UL (UL 10B, UL10C), British (current and previous editions of BS 476 Parts 22 and 23), Canadian (ULC/CAN-S104, ULC/CAN-S105 and ULC/CAN-S106) and European standards (e.g. EN 1364-1, EN 1634-1 and EN 1634-3) as well as the IMO Fire Test Protocol.

PRODUCT GROUPS *(continued)*

Firestops, Joints and Perimeter Containment

UL single-source testing and rating to North American and European standards helps to ensure that firestop and joint systems comply with current industry standards and provide a high level of protection for people and property. Firestop and joint systems can also be evaluated based on specific characteristics of each material or system for possible flame, temperature, air and smoke leakage, and water resistance ratings. Finally, UL offers testing and certification services for perimeter fire containment systems used where the floor of a structure meets the outside wall of a building.

Exterior Wall Systems

Exterior wall systems are designed to be aesthetically pleasing while using innovative materials that are cost and energy efficient, air and water resistant and fire safe. These materials include air barriers, water resistive barriers, exterior laminates, composite panels and foamed plastic insulation.

UL's certification for exterior wall systems and components provides manufacturers, architects and building contractors the evidence needed to demonstrate compliance to various air and water infiltration standards, such as ASTM E331 and ASTM E2357, in conjunction with NFPA 285.

Record Protection

For 80 years, UL has helped safeguard valuable records and data by developing test methods that evaluate and rate the performance of self-contained, movable devices, including file cabinets, single and double door safes and single lid containers. Classified products appear in UL's searchable Online Certifications Directory and are referenced by more than 2,500 code authorities annually.
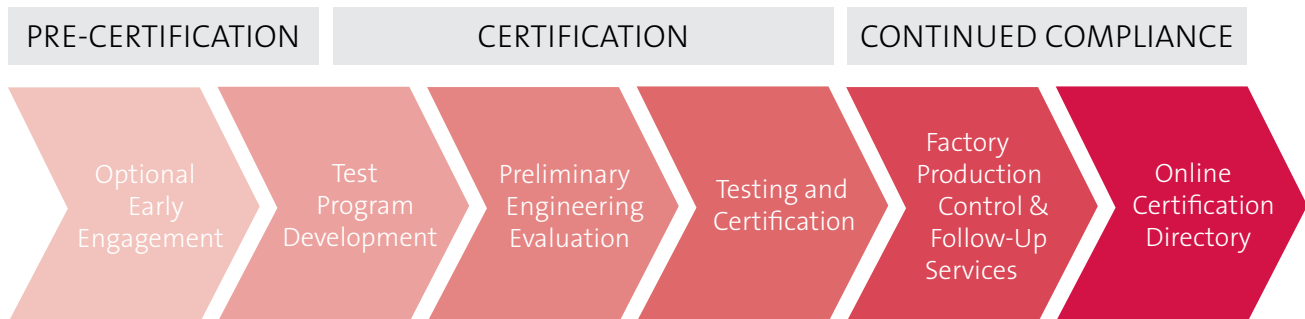
Fire Testing to International Maritime Fire Standards

One of the biggest safety risks aboard marine vessels is fire. Confined spaces, flammable materials and toxic smoke can quickly escalate a fire into a life-threatening scenario risking the safety of those aboard as well as the structure of the ship. The Building Materials team at UL offers the ability to test and evaluate products such as doors and firestopping products against the current edition of the IMO Resolution MSC.307(88), International Code for Application of Fire Test Procedures.

BUILDING MATERIALS

SAFETY CERTIFICATION

PRE-CERTIFICATION	CERTIFICATION	CONTINUED COMPLIANCE

Optional Early Engagement	Test Program Development	Preliminary Engineering Evaluation	Testing and Certification	Factory Production Control & Follow-Up Services	Online Certification Directory

Early Engagement

UL offers an optional pre-certification phase to help customers determine the best approach to their product submittal process. This advisory phase involves technical discussions surrounding UL's testing and certification requirements and can help minimize delays and prevent redesigns. Early engagement provides an opportunity to review product construction features and identify critical tests and/or schedules that can minimize costs for rework and delays in issuing certification.

Optional Early Engagement
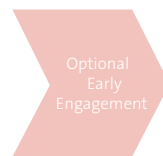
Test Program Development

A UL engineer will work with the manufacturer to develop a test program. This provides an accurate statement of work and a quote for certification. During this process UL will review product specific information, including the region or country in which the product will be sold, product brochures, engineering drawings, and installation instructions (if applicable) to determine the appropriate compliance standard(s) and applicable tests.

Test Program Development

Preliminary Engineering Evaluation

UL recommends starting with a preliminary investigation to conduct critical tests, such as long-term aging or fire performance tests, and determine a level of compliance. During a preliminary investigation, UL collaborates with the manufacturer to determine which tests to conduct. After each preliminary investigation, UL provides a detailed report of all test results.

Preliminary Engineering Evaluation
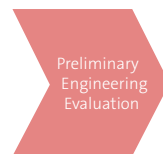
SAFETY CERTIFICATION *(continued)*

Testing and Certification

During testing and certification, all samples and relevant documentation such as product specifications, engineering drawings, and installation instructions must be provided. UL's engineers and lab technicians will then conduct all required tests and evaluations in accordance with the applicable standard(s). Upon confirmation of compliance, UL issues a certification report and schedules an initial production inspection at the manufacturing location(s) to confirm the production facility is ready and authorized to produce UL Certified products.

Factory Production Control (FPC) and Follow-Up Services (FUS)

UL performs regular follow-up visits to the manufacturing location(s) to help ensure that the products being produced are representative of the products evaluated during the certification program. These visits identify supply chain issues, such as material substitutions, and help ensure the continued value of the UL Mark.

Online Certifications Directory

Certified products are entered into UL's Online Certifications Directory. This directory is a valuable, free-of-charge resource used by stakeholders looking for products that have been certified in accordance with specific standards or requirements. (View the Online Certifications Directory at www.ul.com/database.)

Testing and Certification

Factory Production Control & Follow-Up Services

Online Certification Directory

PERFORMANCE TESTING

UL's performance testing services provide objective confirmation of product performance following a specific test method in controlled laboratory settings.

Verification Testing
UL engineers and lab technicians will conduct specified testing and provide a data-only test report. This report will not include a conclusion about the data outcomes or statements of compliance.

Door Hardware
Performance testing for various standards allows manufacturers to enter global markets with a single product submittal.

Durability Testing for Steel Protection
Fire resistive coating materials that protect structural steel may experience conditions after installation that might impact its ability to thermally protect the structural steel in the event of a fire. The UL 2431 certification program simulates certain conditions, such as high humidity and vibration, prior to the fire endurance evaluation to help ensure the fire resistive coating material will perform as intended in the field.

Energy Star for Roofing
UL can conduct both Energy Star and Cool Roof Rating Council testing and certification for Roofing Products. This testing includes Solar Reflectance (ASTM C1549) and Thermal Emittance (ASTM C1371).

Fuel Pipes
Certain building codes and jurisdictions require fuel pipe (pipe conveying combustible liquid from a supply tank to a generator) to be protected by unspecified, fire-rated construction. UL 1489 provides a compilation of standardized experiments to evaluate the fire resistive construction protecting the fuel pipe from breaches or leaks in the event of a fire.

QUALIFIED CONTRACTOR PROGRAM

The Qualified Contractor Program provides architects, code authorities, and building owners with a way to identify contractors that comply with the Qualified Contractor Program Requirements established by UL and ULC.

Through the Qualified Contractor Program, UL provides stakeholders with a means of identifying independently assessed contractors involved in the installation of firestops and steel protection materials. The program includes contractors that have demonstrated knowledge and a comprehensive management system that specifically focus on the selection and installation of these firestopping and spray-applied fire resistive material products. The contractor's systems audited under this program provide an integrated approach (demonstrated knowledge and management system) to controlling the processes in addressing architectural, code authority, and customer requirements. Once the contractor has met the program requirements, the contractor is issued a Certificate effective for one year.

BUILDING INSPECTIONS

UL's building inspection services provide building owners and facility managers with the information they need to identify building compliance gaps, identify where improvements are needed to maintain compliance with fire and life safety codes, and ultimately deliver confidence in building and occupant safety and the continuity and sustainability of the business. This service helps provide architects, insurers and code authorities with confidence that fire and life safety and security systems will operate properly in the event of a fire.

CODE EVALUATION SERVICE

In some scenarios, individual safety certifications may not be enough to determine compliance with the requirements specified in the International Building Code or the International Mechanical Code. UL's Code Evaluation Service intends to expand on those safety certifications by providing technical guidance through the UL Evaluation Report to code authorities, architects, and specifiers so that they are able to properly determine product compliance. UL Evaluation Reports are used to provide safe, code compliant installations when the requirements are not specified for a product, or the product is not included in the model installation codes, or when the product is required to meet multiple standards by the code.

TRAINING

UL offers technical training for the building and life safety industries by providing the educational resources needed to develop, manufacture, install and deploy safer products throughout the global marketplace.

Customized Training Programs and Testing Solutions

A broad portfolio of training resources is available to help customers better understand fire testing methods, critical concepts in fire resistance testing and key performance criteria for different products. These training resources include self-guided eLearning sessions, live and recorded webinars with UL subject matter experts and customized in-person seminars developed for specific training needs.

New educational offerings are created on a consistent basis. *Please visit UL.com/blsttraining for a complete list.*

RESOURCES

Architectural Chat - *www.ul.com/architects*
Chat online with UL subject matter experts.

Code Link - *codelink.ul.com*
A powerful tool that correlates installation code sections with ULCertifications and services.

Online Certification Directory - *ul.com/database*
UL's Online Directory is used and viewed by manufacturers, authorities, architects, designers, contractors and building owners globally for verification of a UL Certified product.

Product Spec - *ul.com/productspec*
A fast and easy way to access UL Certification information to achieve safe, sustainable, and code compliant installations. This next generation search engine allows a user to search, validate or confirm a wide range of UL certified construction materials, equipment and fire-resistance rated assemblies and systems.
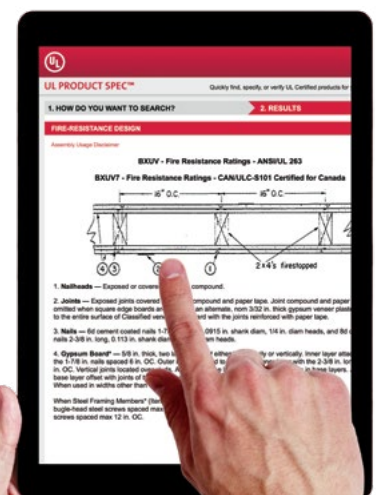
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