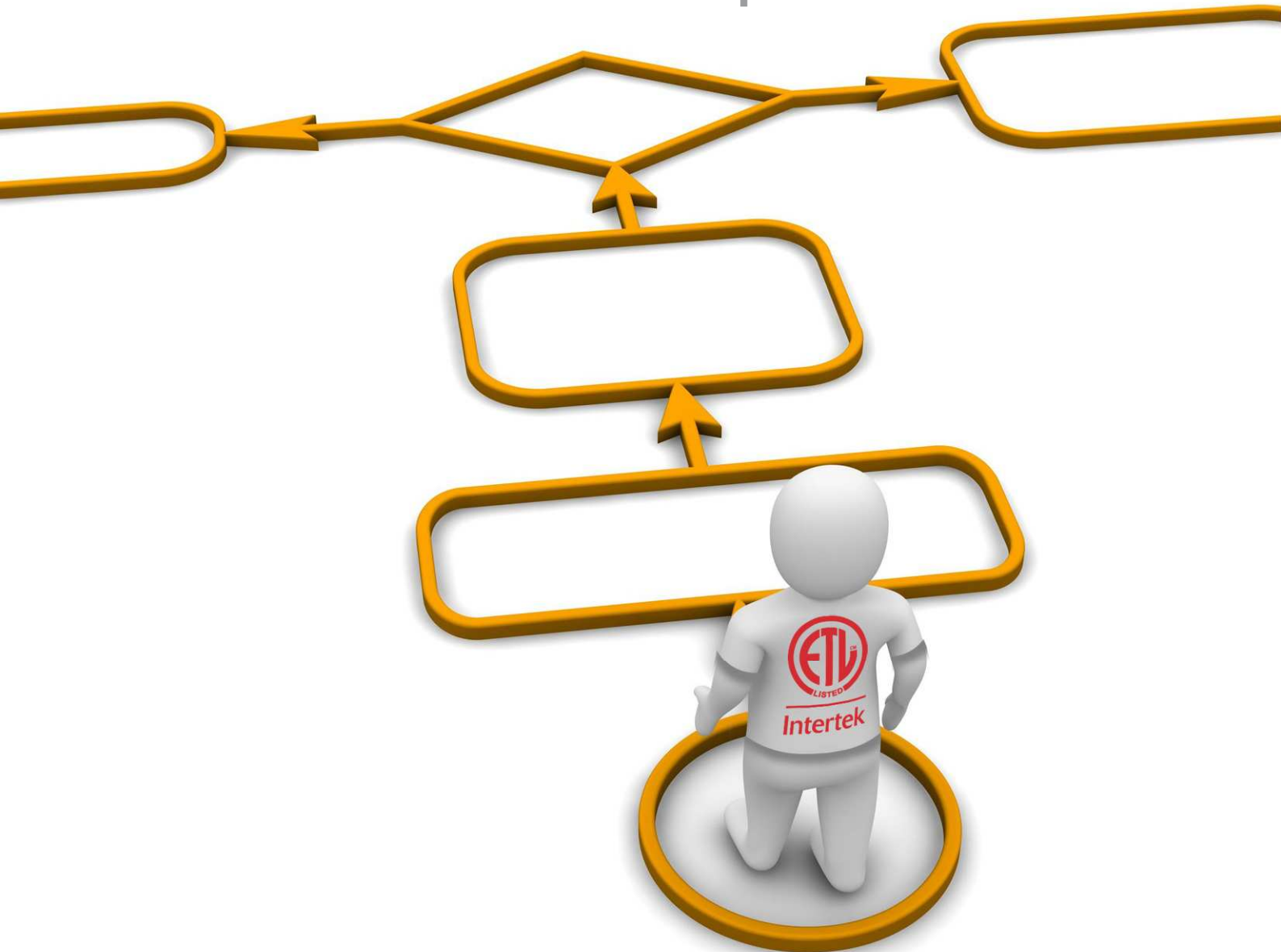




Valued Quality. Delivered.



ETL Certification the end to end process



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Introduction

Using this guide to ETL Listing, you can get on the inside track to faster certification. Knowing what materials you need in advance, how to benefit from Listed, recognised and classified components, and what to expect from Intertek as your Certification Body, you can make the process more efficient and get your products to market faster.

First let's have a look at some of the frequently asked questions about Certification and Certification Bodies to put the material in this paper into context:

What is an ETL Certification (Listing) Mark?

An ETL Certification Mark (also known in the US as a Product Listing Mark) is awarded to a product by a third party assessment body to recognise that a product fully meets a set of performance criteria for particular set of product characteristics. For electrical products these are typically characteristics such as (but not exclusively) safety. The specific requirements that must be met to obtain a certification/listing are usually laid out in the Standards that govern each product type, either regionally, nationally or internationally. In the case of ETL Certification for North America, it is US and Canadian Standards that are used to measure the performance of a particular product before it can be certified for the US/Canadian market.



When a product receives a Certification /Listing it's basic identity details are then added to the 'Listed Directory' maintained by the Certification Body (available online), where users, retailers, exporters, wholesalers, installers, contractors and the authorities – known as 'Authorities Having Jurisdiction' (AHJs) - can check that the product carries an approval. The manufacturer will also 'Mark' the product, the packaging, literature and promotional materials to communicate that the product has a 3rd party approval. Certification marks are recognised by port authorities, vendors, importers, distributors and regulatory authorities as a visual shorthand confirming the fact that a product has been assessed by a competent authority and is deemed by them to meet applicable Standards.

Certification is then maintained through regular, unannounced product and manufacturing site inspection, to check production continuity between the current production run and the sample that was originally tested.

About AHJs:

Authorities Having Jurisdiction (AHJs) make the final judgement that something is acceptable for use in a particular installation – and AHJs accept ETL Listing when approving an installation.

An AHJ can be a federal, state or industry representative. For example, California has specific product laws which are not in place elsewhere in the US – so a state official could be an AHJ. Similarly in a hospital environment a specialist inspector in Medical products could be an AHJ.

What gives a Certification Body the right to certify a product?

A Certification Body (CB) has to demonstrate their expertise in a particular product or field to the relevant authorities before they can start issuing Certifications for that area or product. Once this expertise has been deemed acceptable by the authorities the CB receives an accreditation or authorisation to test/assess and issue Certification/Listing. In the US, the accrediting authority is the Occupational Safety & Health Administration (OSHA) and the type of accreditation they issue is to make a CB a 'Nationally Recognised Testing Laboratory' (NRTL). Currently there are more than a dozen NRTLs – each with a particular scope covering certain product groups. You can view the current list of accredited NRTLs at: <http://www.osha.gov/dts/otpca/nrtl/index.html>

Intertek is an NRTL for the US and Canada and we currently have over 1350 different UL and ANSI Standards in our scope that we can certify products to for North America.

What types of products are certified?

While there are mandatory requirements for certain types of products to carry a Certification/Listing in the US before they can go on sale, generally any product that has a Standard governing it can be certified. We regularly certify items including:

- Domestic electrical products
- Lighting
- Building products & materials
- Medical equipment
- Equipment for hazardous and potentially explosive environments
- Life safety and security products
- Industrial equipment
- Defence products
- Radio, telephony and communications equipment

That said most manufacturers seek a Certification/Listing for their products going to the US as it is commonly required by Port Authorities (a type of AHJ) - and it is extremely difficult to secure vendor channels without them as vendors share a legal responsibility with the manufacturers to supply safe products.

Why do manufacturers choose the ETL Listed Mark?

Choice. Manufacturers want choices for all their procurement needs, including their testing and certification provider.

Is the ETL Listed Mark legal equivalent to the UL and CSA Listed Marks?

The true legal requirement to test and certify products for sale in the United States is a designation by the Occupational Safety and Health Administration (OSHA) as a

Nationally Recognised Testing Laboratory (NRTL). An NRTL functions to provide independent evaluation, testing, and certification of any electrically operated or gas- and oil-fired product. Intertek is recognised as an NRTL in the United States and, in a similar capacity, as a Testing Organisation and Certifying Body in Canada by the Standards Council of Canada. We encourage you to visit OSHA for more information.

A product bearing the ETL Listed Mark is determined to have met the minimum requirements of prescribed product safety standards. Moreover, the mark indicates that the manufacturer's production site conforms to a range of compliance measures and is subject to periodic follow-up inspections to verify continued conformance.

What's the difference between the UL, CSA, and ETL Listed Marks?

Both marks demonstrate that the product that bears it has met the minimum requirements of widely accepted product safety standards as determined through the independent testing of a Nationally Recognised Testing Laboratory (NRTL). And, as part of that testing regimen, the product manufacturer has agreed to periodic follow-up inspections to verify continued compliance. The only real difference between the Marks is in the service, and services, of the testing laboratory behind them. It's here that Intertek's clients enjoy the real differences between UL and ETL. Our custom-tailored testing, quick turnarounds, and flexible work methods are literally changing the face of the industry by promoting an environment where the testing lab and product manufacturer work more collaboratively. Together, we deliver products to market more quickly, more smoothly, and more cost-effectively than ever before.

What is an NRTL?

A Nationally Recognised Testing Laboratory (NRTL) is an independent laboratory recognised by the Occupational Safety and Health Administration (OSHA) to test products to the specifications of applicable product safety standards – such as those from Underwriters Laboratories (UL) and other standards-writing bodies. An NRTL's function is to provide an independent evaluation, testing, and certification of any electrically operated or gas- and oil-fired product. Intertek is recognised as an NRTL in the United States and, in a similar capacity, as a Testing Organisation (TO) and Certifying Body (CB) in Canada, and as a Notified Body in Europe.

What are the specifics of the NRTL program?

The NRTL program is part of OSHA's Directorate of Technical Support. As part of OSHA's directive to ensure that products are safe for use in the U.S. workplace, the NRTL program recognises the capabilities of private sector organisations to determine if specific products meet consensus safety standards. OSHA safety standards are United States law and can be found in Title 29 of the Code of Federal Regulations (CFR). More specifically, the provisions for NRTL certification can be found within Part 1910 of the CFR (29 CFR Part 1910). It is important to

note that OSHA's recognition of an NRTL is not a grant of government authority, but rather an acknowledgment of the organisation's ability to perform product safety testing and certification within the scope of its OSHA recognition. For more information about the NRTL program, we encouraged you to visit the OSHA Web site at www.osha.gov.

Aren't manufacturers required to use UL for their compliance testing? Isn't this mandated by the standards themselves?

The simple answer to both questions is "no". In fact, this misconception has misled many manufacturers to believe that they don't have a choice in their third-party testing partner. To satisfy the prerequisite of having your products tested by an independent organisation, the true legal requirement is that the laboratory which performs the testing be a Nationally Recognised Testing Laboratory (NRTL) recognised by OSHA. Intertek is recognised worldwide as a competent testing, inspection, and certification organisation, and our ETL Listed Mark serves as proof of product compliance with U.S. standards.

What does the ETL Listed Mark mean when displayed on my product?

In short, the ETL Listed Mark indicates that your product has been tested by Intertek, found in compliance with accepted national standards, and meets the minimal requirements required for sale or distribution. To your distributors, retailers, and customers, the ETL Mark is assurance that the product is compliant with safety standards, having been tested and certified by a third-party organisation.

Will retailers accept my product if it bears the ETL Listed Mark?

Yes. Since the ETL Listed Mark is an accepted and recognised demonstration of product compliance, and Intertek is recognised as an NRTL, there is no reason why retailers should not accept products bearing the ETL Listed Mark. Any indication otherwise by an individual retailer or distributor likely stems from misinformation in the marketplace—the same misinformation that has led some manufacturers to believe they don't have a choice in their third-party testing organisation. Intertek has taken a leadership role in educating the industry on the legal requirements behind regulatory compliance, and we continue to make great strides in helping those manufacturers and retailers who remain confused to better understand their true responsibilities to the marketplace and the competitive advantages we offer.

What should I tell my clients who aren't familiar with the ETL Listed Mark?

There is no standard formula for better acquainting clients and customers with the ETL Listed Mark. Depending on the background, circumstances, and other details of a given situation, the correct approach will be unique from one instance to another. Some clients' concerns can be relieved by simply showing them a list of the other respected products bearing the ETL Listed Mark (available in our Directory of Listed Products). Others may erroneously believe that the UL Mark is the only acceptable demonstration of product compliance and require a more

thorough explanation of the true legal requirements behind third party product safety testing. It is important to listen closely to your client's issues and provide them with real answers to their concerns. Inform them about the NRTL program. Explain to them how our Product Safety Certification Program includes the same testing, listing, labelling, and follow-up inspection services as UL, and that we're accredited by the same organisations, agencies, and regulatory bodies. But perhaps most importantly, stress to them the ways in which Intertek is making conformity assessment a more flexible and accommodating process – so that they no longer see product safety testing as strictly an obligation, but as a process that can add value to their product development cycle(s) and help to speed them to market.

What type of products bear the ETL Listed Mark?

Intertek provides a broad range of product safety testing and certification services for companies spanning multiple industries, markets, and applications. As such, the products bearing our ETL Listed Mark run the gamut from air conditioners to x-ray equipment. For a comprehensive look at which products bear our mark, we invite you to look at our Directory of Listed Products, which provides details on every product tested and certified by Intertek.

What countries accept the ETL Mark?

The ETL Mark is an accepted demonstration of product compliance in both the United States and Canada. However, it is important to note that through our scope of worldwide accreditations, Intertek is authorized to furnish the product safety marks required for sale and distribution in other countries. Such marks as the NOM Mark, CE Mark, GS Mark, and S Mark to name a few.

Are local inspectors (AHJs) familiar with the ETL Listed Mark?

Yes. The ETL Listed Mark is recognised by local inspectors and Authorities Having Jurisdiction (AHJs) throughout North America and also in some areas of South America. As Intertek is an NRTL recognised by OSHA, the ETL Listed Mark is an accepted alternative to UL and, as such, inspectors and AHJs recognize, acknowledge, and accept the mark as proof of product compliance.

How long has the ETL Listed Mark Been Around?

"ETL" has been around over 100 years. When manufacturers apply Intertek's proprietary ETL Listed Mark to their products, the letters "ETL" carry with them a long history of innovation, influence, and independence. In fact, the original Electrical Testing Labs (ETL) was founded by Thomas Alva Edison in 1896.

Electrical Testing Labs was formed to address concerns of lamp safety and performance issues. Edison's vision was to provide assurance to consumers, through various types of product performance and safety tests. The basic principles of Edison's third-party lamp testing methods remain the same today. Experts monitored lamps and bulbs to determine how long they would burn, the luminous

intensity, and if everything burned as it should – without combustibility or explosion. Read more information on Intertek’s rich history and learn how our testing services help manufacturers around the world.

What are the variations of the ETL Listed Mark?

A product bearing the ETL Listed mark with the "us" identifier at the 4 o'clock position has been tested and deemed compliant to U.S. product safety standards only. An ETL Listed mark with a "c" identifier at the 8 o'clock position means the product bearing it complies with Canadian product safety standards only. And an ETL Listed mark with both "us" and "c" identifiers at the 4 o'clock and 8 o'clock positions respectively, signifies that the product bearing the mark complies with both U.S. and Canadian product safety standards.

ETL Certification /Listing

There are 3 ways to obtain an ETL Certification/ Listing:

1) New Application

Stage 1 – Getting a Quotation

Decide you want your product to be sold in the US or Canada. Approach us with as much information as you have on the product to obtain a quotation for Listing. The application data to supply should typically include:

- Drawings/Product Photographs (if available)
- Product Specifications (dimensions, power ratings, materials list etc)
- Product description (intended use)
- Target user base (e.g. domestic/commercial, mature consumers/children etc)
- Details of any approved/certified sub assemblies or components that will be used in the finish product
- A prototype or regular sample (if available)

It would also be helpful to know if you intend to limit the distribution of your product to certain States - for example California has particular mandatory requirements for certain types of products (like air filtering appliances for example) that need to be tested. If you are not intending to distribute your product there we will not need to consider these additional tests when quoting for you. If you intend

to distribute nationwide, then we will consider all of the necessary local deviations in our proposal to ensure your test programme covers all the territorial requirements.

We will review the material you send us, taking into account any listed, recognised or classified components or sub-assemblies which will be used in the product, then select the applicable standards for testing then identify a suitable laboratory in our network to conduct the work and a qualified reviewer to assess the results. We will then consult with them about the project and then provide a quotation – which will detail the number of samples we need, list the Standards involved, their edition numbers and relevant revision dates.

If no suitable Standard exists for a product we can develop a framework for assessment based on the nearest relative Standard. For example with tanning beds - a specific Standard for these products doesn't exist, so we'll identify the nearest relative product (tanning lamps) and use the tests required by the Standards governing those products to build an appropriate test programme. The product will then be listed against that source Standard. Our authority as an NRTL means we have the right to make expert decisions about the tests we undertake and the conclusions we make, without compromising the validity of the certifications/listing we issue.

Once that quotation is signed off by you and a purchase order is returned, we will acknowledge your order and define the testing schedule and then the project moves onto stage 2.

Returning paperwork seems bureaucratic, but it is vital to move on to the next stage. Paperwork gives both us and our clients visibility that a project is underway. While an email or a telephone call finalising the details of the project and giving the go-ahead are always useful, it is only the documentation that triggers the next stage in the process.

Additional Applicant Notes: Listed, Recognised and Classified Components

If a manufacturer purchases components or sub assemblies from a third party to use in their finished product, they can reduce the amount of potential testing they have to undertake towards their own end product ETL certification by using listed, recognised or classified components.

Listed components - These are usually complete sub-systems or assemblies (like controls) that already have full Certification/Listing in their own right. These systems are used 'as-is' in the final product. These will not need to be retested, but we will check the products parameters for use in the end product.

Recognised components - Recognised components are incomplete products that are used in end products. Generally these will already have been tested to some degree – but we will need to be made aware of what the conditions the component has been tested under. These are called ‘Conditions of Acceptability’. For example a power supply may have been assessed with a particular type of fuse or a motor may have been tested without its casing (not typically how it will be used as components are usually shipped in their finished casing and in this instance heat build-up could be a problem).

Getting the Conditions of Acceptability for a sub-system, as well as the product datasheet/specifications will help us to quote more accurately and will save time on the project - by preventing delays and enabling us to remove tests for these products from the programme. If we don’t know that a component or sub-assembly has already been assessed we will treat it as an unlisted component and it will probably need to be assessed – particularly if it is a critical system such as a control.

If no Conditions of Acceptability exist for a component our engineer will make assumptions on what these are, and these will be specified in the end report to document the parameters of the assessment.

Classified components - A classified product has been assessed in a more regular way against a Standard, but does not meet all of the requirements for a Standard. One example would be a Medical product that meets the safety requirements of the Medical product Standards, but not the EMC requirements. Another example would be a safe or strongbox that is fireproof, but is not burglar- proof as it can be stolen in its entirety if it isn’t secured to the floor!

Some certification bodies will only accept listed, classified or recognised components that they have certified themselves without further testing, whereas Intertek will accept listed, classified or recognised components certified by any NRTL. This helps to prevent delays in the product assessment process, saving time money and frustration, and supports your right to choose which listed components you use.

Intertek can test products to Recognised and Classified Status as well as full Listing and each will be awarded a Mark, but these Marks will be embellished with the words ‘Recognised’ and ‘Classified’ accordingly:



Stage 2: The Product Information Pack

Now the Product Information Pack (PIP) is issued to you. This outlines the process and contains the forms that we'll need from you to complete the listing. It will also indicate what the project milestones are.

A key form to complete from this pack is the 'EURFC1 - New Applicant/Manufacture Form' – See Appendix 1. This form needs to be sent to the Regional Follow up Service Centre in Sweden. This team will provide assistance during the ETL application process.

Stage 3: Supply Samples & Test

Once we receive the appropriate samples from you, we will commence the testing process. Should the product fail a test at any stage in the assessment we will contact you with our findings. You may want to pause the assessment at this point while you make refinements to the product and this is no problem, simply let us know. Once you are ready for the assessment to continue, notify us and we will recommence.

Should the product pass all of the tests in the Standard, we will then draft a Listing Report.

Stage 4: Follow Up Services

During product assessment your local Intertek office managing the project work closely with the Regional Follow-up Service Centre (RFSC)

The RFSC for Europe is based in Sweden and they will supply you with information you need to complete the process, costs for follow up services and they also schedule inspectors to make the relevant factory assessments. They will send you:

- Information about Certification
- Certification Agreement
- Client Information Form
- Information on labels and marking
- Information on Production Line Inspection

Stage 5: Initial Factory Inspection

Once the product has been assessed and the test report drafted, the RFSC will send an inspector out to inspect your manufacturing site(s). If this meets our quality systems requirements, the Listing Report will be finalised for product approval.

Stage 6: Final items to Action

In order to receive your final authorisation to Mark, you will need to ensure the following items are in place:

- Final production line testing has been completed
- A factory inspection has been completed at each site where the product is to be made
- A Listing Report (LR) is available
- The Certification Agreement is signed in duplicate and both returned to Intertek for counter-signing
- A facsimile of the ETL Listing Mark as it will appear on the product (either on a label or via a direct imprinting) has been submitted to Intertek for approval
- That a Client Information Sheet has been completed and sent to the team at Intertek AB in Sweden
- A PO has been sent to the Regional Follow-up Service Centre (Intertek AB in Sweden), to initiate the Follow Up Services (un-announced inspection and product review) that are required for the ETL scheme

Stage 7: Intertek formally issues the Listing Report (or Classification Report)

This details:

- The agent, applicant and site of manufacture
- Describes the product
- The pre-product inspection findings
- Lists the Standards used in the evaluation and summarizes the results
- Details special requirements regarding unlisted components
- Indicates production line testing requirements

What is the descriptive report for?



Be an insider outside of our lab

Intertek

The Satellite Scheme:

Satellite is a scheme run by Intertek to accept testing conducted by a manufacturers own laboratory to help reduce costs and further increase speed to market. We can recognise the expertise of the laboratory and the validity of the test results they produce. 4 Levels of acceptance are available:

Level 4 - Manufacturer conducts testing and prepares report without Intertek presence

Level 3 - Manufacturer conducts testing without Intertek presence; Intertek prepares report

Level 2 - Intertek engineers witness tests conducted by the manufacturer and prepare reports

Level 1 - Intertek engineers conduct full testing at the manufacturer's site and prepare reports

If you would like to participate in the Satellite scheme and use your own test laboratory to conduct product assessment against relevant Standard, call us today on 01372 370900 or email us at electrical.uk@intertek.com.

- It provides technical detail of the product and the test specification necessary to ensure the product remains compliant with the certification standard.
- Is used by the manufacturer to ensure their product remains in compliance.
- Is used by our Field Representative to monitor the production of the product to ensure that it remains compliant.

Stage 8: Authorisation to Mark

An Authorisation to Mark (ATM) is then issued, enabling Manufacturers to mark the product and packaging with the ETL Mark. A Mark can either be on a sticky label or it can be added to a product by direct impression onto the product information plate.

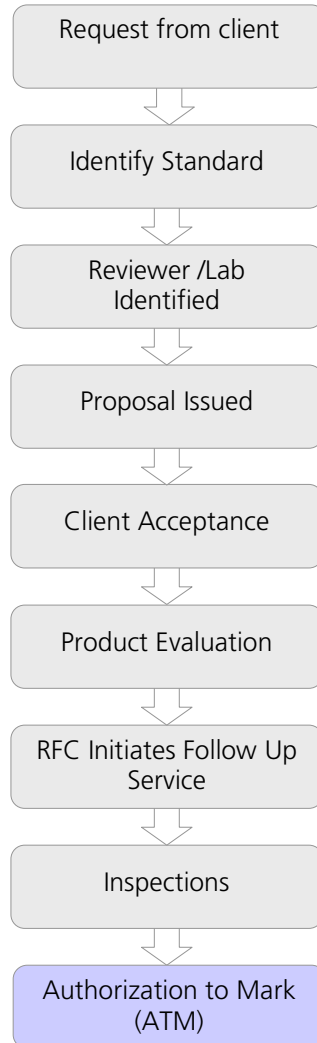
The ETL Listing Mark consists of the following four items:

1. The ETL Certification Mark with "US" and/or "C" as identifiers. The letter "C" adjacent and to the lower left side of the ETL Certification Mark indicates that the product complies with a Canadian standard. The letters "US" adjacent and to the lower right side of the ETL Certification Mark indicates that the product complies with a US standard. The required minimum size of the identifiers is 2 mm.
2. The word, "Listed" or "Classified" or "Recognised Component" (whichever is appropriate). The word, "Listed" is to be incorporated into the ETL Certification Mark. If upon reduction, the word "listed" is not legible as part of the trademark, it shall also appear separately.
3. The Control Number issued by Intertek. This five to eleven digit number is unique to the manufacturing site for each applicant.
4. A product descriptor, which refers to the national standard used for certification, shall be used. Example:

For US standards, the words, "Conforms to" shall appear with the standard number along with the word, "Standard" or "Std." Example: "Conforms to ANSI/UL Std. XX."

For Canadian standards, the words "Certified to CAN/CSA Standard CXX No. XX." shall be used, or abbreviated, "Cert. to CAN/CSA Std. CXX No. XX."

The complete process of a New Application can be summarized as follows:



2) ETL Listing from a CB Report & Certificate

You can obtain an ETL listing through the IECEE's CB Scheme which facilitates the mutual recognition of test certificates for electro-technical equipment and components between accredited Certification Bodies

What is the process?

- a) Applicant approaches their existing Certification Body and obtains their detailed CB Test Report Form and certificate (no more than 3 years old)
- b) Applicant brings the certificate and report to Intertek as part of their ETL application.
- c) Intertek reviews the report, certificate and a sample of the product
- d) If satisfactory, Intertek will draft a Listing Report and an Authorisation to Mark (ATM)
- e) Intertek conducts an Initial Factory Inspection audit
- f) On completion of a successful factory inspection, the actual Listing and ATM is issued.

There is no provision for engineering judgements in this route.

3) ETL Listing from a File Transfer

If you have an existing product Certification/Listing from another NRTL you can easily transfer to ETL Listing. We will use your existing file as the basis for awarding the ETL Mark.

- a) Applicant approaches their existing NRTL or CBTL and obtains their complete test and certification data
- b) Applicant brings the certificate and report to Intertek. The file reviewer assesses the documentation and determines if any additional testing is required.
- c) If no further testing is required, a factory inspection audit is conducted and a new Listing report and ATM is issued from Intertek.

What data do you need to supply for a file transfer?

- Complete product specifications and detailed description (enough information for our field inspector to assess the product) and complete test reports, detailing the Standards tested to and the equipment used to test the product.

Why switch to ETL if you've already got a listing from an NRTL?

- Flexibility: To be able to have Listed components from any NRTL accepted towards the overall compliance of your product. Some other NRTLs, insist that you only use listed components assessed by them. Intertek doesn't make this restriction, if another NRTL has listed them then that is acceptable to us.
- Service: To obtain faster or enhanced levels of service. If you perceive that that you are not getting the speed, courtesy or service you feel you deserve, it is easy to switch provider. Just because you've been working with one NRTL for many years, doesn't mean you should put up with lower levels of service than you expect.
- Cost: Overall certification costs are lower with ETL, especially our follow up services and labelling. What's more, by using the Satellite programme some clients save as much as 40% from their previous provider.

In conclusion, obtaining an ETL Certification/Listing Mark may seem like an involved process! But remember if you are aiming to sell your product in North America, you will need a Listing from an NRTL – and most use the same basic process which has evolved over a number of years to ensure that the product assessment is rigorous and that all aspects of the Certification are traceable.

ETL Listing from Intertek delivers:

- Speed - helping you to get your product to market fast as we realise that the number of selling days available to you is essential to your bottom line profitability.
- Service - we will work with you to make the Certification/Listing process as efficient as possible
- Flexibility – we offer three entry routes to the ETL Mark (new application, application via the CB scheme and via file transfer from another CB) giving you range of choices in how to tackle the conformity assessment

If you have any further questions about the ETL process, or if you want to get started, then give our team a call on 01244 882 590 and they'll be pleased to help you.

Glossary

AHJ	Authority Having Jurisdiction (e.g. Port Authorities, Building Inspectors)
ANSI	American National Standards Institute (Standards writing body)
ASME	American Society of Mechanical Engineers (Standards writing body)
ASTM	American Society for Testing and Materials (Standards writing body)
ATM	Authorisation to Mark – a document that the applicant receives on completion of his product assessment and factory inspection authorising him to apply the ETL Mark to his product
CB	Certification Body, for example Intertek
CB TRF	Certification Body Test Report Form (Used in the CB Scheme) – outlining basic product description and the Standards to which the product has been tested.
CSA	Canadian Standards Association (Standards writing body)
IEEE	Institute of Electrical and Electronics Engineers (Standards writing body)
LR	Listing Report
NFPA	National Fire Protection Association (Standards writing body)
NRTL	Nationally Recognised Test Laboratory, a body accredited by OSHA to award Certification/Listing on the US & Canada
NSF	National Sanitation Foundation
OSHA	Occupational Safety & Health Administration, the US Accrediting body and part of the US Department of Labour (Comparable to the Health & Safety Executive in the UK)
PIP	Product Information Pack, a request for information about your product that we make to you before we begin assessment.
UL	Underwriters Laboratory (Standards writing body)

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