



**U.S. Department of Labor
Occupational Safety and Health Administration
Directorate of Technical Support & Emergency Management
Office of Technical Programs and Coordination Activities**

**CERTIFICATION OF WORKPLACE PRODUCTS BY
NATIONALLY RECOGNIZED TESTING LABORATORIES**

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Purpose

The Occupational Safety and Health Administration (OSHA) developed this Safety and Health Information Bulletin (SHIB) to enhance understanding of standards related to OSHA's Nationally Recognized Testing Laboratory (NRTL) Program. Specifically, the purpose of this SHIB is to aid employers, workers and others involved in occupational safety and health in:

- Identifying specific OSHA requirements for product¹ approval by NRTLs;
- Understanding OSHA's process for recognizing NRTLs and the NRTL product-approval process;
- Understanding potentially serious hazards caused by products that are not approved (i.e., noncompliant products); and
- Recognizing products that are not approved and factors that can cause noncompliance with the approval requirements.

Introduction

A number of OSHA standards contain requirements for "approval" of specific products² by an NRTL. As explained later, the approval process generally consists of **testing and certification** of a product by an

This Safety and Health Information Bulletin (SHIB) is intended to provide information about standards relating to OSHA's Nationally Recognized Testing Laboratory Program. The Occupational Safety and Health Act requires employers to comply with safety and health standards and regulations promulgated by OSHA or by a state with an OSHA-approved state plan. However, this SHIB is not itself a standard or regulation, and it creates no new legal obligations.

NRTL. The requirements protect workers by helping to ensure that the products they use, or are exposed to, in the workplace are safe. The OSHA standards do not specify the safety requirements the products must meet; these requirements are specified by U.S. standards-developing organizations.

NRTLs are third-party (i.e., independent) organizations recognized by OSHA as having the technical capability to perform safety testing and certification of particular types of products. NRTLs provide testing and certification services to the manufacturers of a wide range of products used in the workplace.

After certifying a product, the NRTL authorizes the manufacturer to apply the NRTL's registered certification mark to the product. Generally, the manufacturer applies the mark to the products at the time the products are manufactured. If the certification is done under the NRTL Program, this mark signifies that the NRTL tested and certified the product, and that the product complies with the requirements of one or more appropriate product-safety test standards. Users of the product can

¹OSHA standards may also use the term "equipment" or "materials" when requiring approval.

²In OSHA standards, words signifying "approval" include: "approved," "tested," "certified," "listed," "labeled," and "accepted."

generally rely on the mark as evidence that the product complies with the applicable OSHA approval requirement(s) and is safe or safety compliant.

Situations may arise in which a mark appearing on a product is not valid and legitimate. Employers and workers who believe that a mark is valid and legitimate, when it is not, are using a product not approved under the NRTL Program. Such use may be unsafe and is a violation of the standard requiring NRTL approval of the product.

This SHIB will help users of products and OSHA compliance officers to identify factors signifying that a product is noncompliant (i.e., does not meet an OSHA requirement for approval). It also may be useful to other authorities responsible for enforcing compliance with electrical or fire code requirements. The SHIB provides examples of safety hazards that could arise with the use of noncompliant products. Before covering these topics, the SHIB provides an overview of the approval requirements, followed by a summary of the OSHA NRTL recognition process, and then describes the approval (i.e., testing and certification) process used by NRTLs. Please refer to Appendix B of the NRTL Program Directive for definitions of technical terms used in this SHIB (see the link to the Directive in the “Additional Information” section at the end of this document).

OSHA Standards Requiring NRTL Approval of Products

The “approval” of specific products used in workplaces is required by standards in Title 29 of the Code of Federal Regulations (CFR), primarily in Part 1910 (general industry), but also in Part 1915 (shipyard employment), Part 1917 (marine terminals), Part 1918 (longshoring) and Part 1926 (construction) of this title. The general industry standards require approval for a number of different types of products (see a list of these products at the NRTL Program website (<http://www.osha.gov/dts/otpc/nrtl/index.html>); see also the link titled “Types of Products Requiring NRTL Approval” at the end of this document). Under the construction standards (e.g., 29 CFR 1926.403(a) and 1926.449 (definitions)), a

qualified testing laboratory must approve (i.e., accept, certify, list, label, or otherwise determine to be safe) electric equipment; NRTLs are qualified testing laboratories for this purpose.

The requirements for NRTL approval of electric equipment, which is the type of equipment most often requiring NRTL approval, are in 29 CFR 1910.303(a) and 29 CFR 1910.307(c). As a result of these requirements, most electric equipment used in the workplace must be NRTL approved. States having OSHA-approved State Plans must have the same requirements, or requirements that provide workers with protection that is at least as effective as the OSHA requirements. Currently, there are no State Plan approved NRTLs. (For a listing of State Plan States, see <http://www.osha.gov/dcsp/osp/index.html>.)

Employers should review carefully the NRTL-approval requirements in OSHA standards to determine which requirements specifically apply to the products they use. A description of these requirements is available from the NRTL Program website previously noted (at this website, click the link titled, “Specific References to OSHA Standards Requiring NRTL Approval”). In some cases, specific circumstances or conditions of use dictate NRTL approval of the products. For example, 29 CFR 1910.106(d)(4)(i) requires approval of self-closing fire doors, but this provision applies only to doors installed in openings inside rooms used for the storage of flammable and combustible liquids. In addition, requirements other than NRTL-approval requirements may apply to the products. For example, electric equipment is subject to standards governing installation, grounding, disconnection, marking and operation. One such standard (29 CFR 1910.303(e)) requires that electric equipment bear the manufacturer’s name, trademark, or other descriptive marking that provides the voltage, current, wattage, or other ratings, as necessary, of the equipment.

OSHA's Recognition of NRTLs

To ensure that each NRTL is qualified to approve products used in the workplace, OSHA established the NRTL Program. The regulations for the program, including the requirements for NRTL recognition, are at 29 CFR 1910.7. OSHA's recognition of an organization as an NRTL assures that it is: (1) independent of the product's manufacturer, supplier and vendor, (2) capable of testing and certifying the product using specified product-testing standards, and (3) regularly evaluated by OSHA for compliance with OSHA's requirements and policies regarding the NRTL Program. OSHA evaluates an NRTL's capability by reviewing its testing and certification procedures as well as its quality assurance program.

OSHA recognizes an NRTL for testing and certifying specific products. The scope of recognition specifies: the product-testing standards which an NRTL can use to test and certify products; the types of test results that an NRTL may accept from other organizations (including manufacturers); and which of the NRTL's testing facilities (i.e., subsidiary facilities) are covered by OSHA's recognition. Each NRTL's scope of recognition and other useful information about the NRTL is available at the NRTL Program website noted above.

NRTL testing must utilize a U.S. consensus-based test standard, developed and maintained by a U.S. standards-developing organization (SDO). An NRTL may use an international test standard (i.e., developed through a multi-country consensus process) if a U.S. SDO makes the international test standard consistent with applicable U.S. codes and requirements.

The NRTL's Product Approval Process

An NRTL's approval of a product generally consists of testing, inspection and certification. **Testing**

involves determining whether a sample or prototype of the product meets the applicable requirements of one or more specific consensus-based, U.S. product-safety test standards. If the product meets the test-standard requirements, the NRTL then performs an initial **inspection** of the factory that manufactures, or will manufacture, the product to verify that the products resulting from production runs are or will be in conformance with the test standard's requirements. Following a satisfactory initial inspection, the NRTL issues its **certification** which provides assurance that the product conforms to the specific test standard(s). The NRTL also authorizes the manufacturer to apply the NRTL's mark to each unit of the manufactured product. After issuing its certification, the NRTL conducts periodic follow-up (i.e., quality-assurance and compliance) inspections of each manufacturing facility to provide assurance that the product currently manufactured at the facility and bearing the NRTL's mark is identical to the product that the NRTL tested and certified.

An NRTL certification mark appears on a label affixed to each unit of a product or is stamped on the product; for small products, the mark may be on the product's packaging. OSHA does not require that NRTLs use a standardized NRTL mark; therefore, each NRTL uses a unique and distinctive mark to certify products under the NRTL Program. An NRTL registers its mark with the U.S. Patent and Trademark Office, and each mark appears on OSHA's web page of NRTL marks³ (see <http://www.osha.gov/dts/otpc/nrtl/nrtlmrk.html>). OSHA does not require the use of certification marks containing the initials "NRTL." However, a few NRTLs voluntarily include these initials on their certification marks to signify they have certified the product under the NRTL Program.

Products requiring approval when used in the workplace may bear non-NRTL certification marks, such as the "CE" mark. (The CE mark is a generic mark recognized by the European Union (EU) to

³To ensure that employers recognize NRTL-approved products prior to their purchase, employers should review OSHA's web page of registered NRTL marks. If uncertain regarding the authenticity of the mark appearing on the product, employers may wish to contact the NRTL to verify that the product in question has been approved by the organization.

indicate that a product meets EU requirements for product safety.) Products that bear only non-NRTL certification marks (including the CE mark) do not meet any OSHA standard requiring NRTL approval of the product.

Manufacturers of electric equipment often use electric components, such as fuses, capacitors and resistors that are *factory installed* into end products such as electric office equipment. In such cases, the end product (but not the individual components) requires NRTL approval. However, when a component functions as a stand-alone electric product that requires NRTL approval under an OSHA standard (e.g., a motor, cord, or plug), an NRTL must approve it before it is used in a workplace.

Hazards of Using Non-Approved Products

Employers may expose workers to serious hazards when they use a non-approved (e. g., job-built⁴), counterfeit, improperly approved, or modified product instead of an NRTL-approved product as required by an OSHA standard. As noted above, NRTL approval ensures that a product meets applicable test-standard requirements and will operate safely in the workplace. For example, NRTL approval ensures that an electric product will operate at its rated voltage, current and power, and will not exceed limits that pose hazards to workers. These hazards include electric shock, arc flash, blast events, electrocution, equipment shorts, explosions, burns, fires, toxic atmospheres generated by burning and decomposing insulation and other materials associated with electrical fires, and wiring and component failures. Other products requiring NRTL approval in OSHA standards, such as equipment that uses liquefied petroleum gas, or powered industrial trucks, can cause explosions if not properly tested by an NRTL.

Recognizing Noncompliant Products

This section will help users recognize when products are not NRTL-approved or have lost NRTL approval. The following discussion provides information on how to: (1) determine the authenticity of an NRTL's mark; and (2) identify whether an NRTL's approval is no longer within its scope of recognition. The following paragraphs describe conditions in which a product bearing an NRTL's mark is not NRTL-approved.

- **The product bears a counterfeit certification mark that resembles a NRTL's mark.** Even when the product looks normal, an examination of the product's mark, either on the product or on the packaging, may indicate that it is counterfeit. Most NRTL marks have distinctive graphic features not easily or accurately reproduced by counterfeiters. For example, the letters used in a counterfeit mark often do not have the same proportions as the letters in the authentic mark. A counterfeit mark also may have unclear printing or spelling errors. A discrepancy between the contents of the product package and the description on the package, or missing product information or other package enclosures, may indicate that the product (and its mark) are counterfeit. When in doubt, OSHA encourages product users to contact the NRTL to determine the authenticity of its mark.
- **The product bears a genuine NRTL mark, but the NRTL did not test and certify it for OSHA purposes.** The NRTL's mark might not differentiate products that it tested and certified under the NRTL Program from products it tested under another (non-NRTL) program. To determine whether a product meets the applicable NRTL approval requirements, a consumer (or inspector) needs

⁴Examples of job-built or repaired equipment which may not be approved include distribution panels, repaired extension cords, and equipment assembled under temporary wiring situations.

to check the NRTL Program website to ensure that OSHA recognizes the NRTL for testing and certifying the type of product (i.e., the test standard for these types of products is within the NRTL's scope of recognition). If the product cannot be found on the NRTL's website, contact the NRTL to confirm that the product was not tested and certified under the NRTL Program.

- **The product bears a genuine NRTL mark, and the NRTL tested and certified the product, but OSHA did not recognize the NRTL for approving this type of product or the NRTL's approval is no longer within its scope of recognition.** In this case, the NRTL has certified a product even though it has not been or no longer continues to be recognized to do so by OSHA. Similar to the preceding case, the product user should check the NRTL Program website to ensure that OSHA recognizes the NRTL for testing and certifying the product. If the product is not listed within the NRTL's scope of recognition, the product user should contact OSHA's NRTL Program Office to determine whether the testing was conducted under the NRTL Program.
- **The product bears a genuine NRTL mark, the NRTL tested and certified the product, and OSHA recognized the NRTL for approving that type of product, but subsequent repair, reconditioning, modification, refurbishing, or remanufacturing of the product changed its features or design.** Changes made to a product after NRTL approval will void the NRTL's approval of the product. Obvious changes may not involve extensive investigation, but other changes may require a

review of documentation to determine upgrades, modifications, or other changes made to the product. Such documentation may be available only when changes follow a formal approval process. In other cases, a product user can determine whether changes have been made by comparing the product's features to the features shown in a schematic in the owner's manual for the product. The product user should report any changes found to the NRTL so that the NRTL can determine if the changes require reapproval of the product.⁵

If a product does not have NRTL approval as required by an OSHA standard, or if the product no longer meets NRTL approval requirements because of changes made to it, the product must be (1) replaced with a properly approved product, (2) approved by an NRTL that is recognized for testing this type of product, or (3) reinspected and reapproved by an NRTL, if it was properly approved but the user has changed it.

Additional Information⁶

Information on OSHA's NRTL Program is available at:

OSHA's NRTL Directive: [NRTL Program Policies, Procedures, and Guidelines \(NRTL Directive - CPL 01-00-003 - CPL 1-0.3\)](#); [PDF, 150 KB, 70 pages].

OSHA's NRTL Program website: <https://www.osha.gov/dts/otpc/nrtl/index.html>.

29 CFR 1910.7 – Definition and Requirements for a Nationally Recognized Testing Laboratory: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9703.

⁵These product changes, even if inadvertent, void the NRTL's approval for that product, and an employer's use of these products in the workplace violates the OSHA standard(s) requiring that the products be NRTL-approved.

⁶Please direct questions regarding the NRTL Program by telephone or via e-mail (see link to OSHA's NRTL Program website above) to OSHA's Office of Technical Programs and Coordination Activities, which is the office that administers the NRTL Program.

Frequently Asked Questions (FAQs) about the NRTL Program:

http://www.osha.gov/dts/otpc/nrtl/faq_nrtl.html

Types of products requiring NRTL approval: <https://www.osha.gov/dts/otpc/nrtl/prodcatg.html>

OSHA standards requiring NRTL approval: <https://www.osha.gov/dts/otpc/nrtl/1910refs.html>

Quick Tips for Identifying Counterfeit Marks:
Developed through the OSHA and American Council of Independent Laboratories (ACIL) Alliance, the Quick Tips provides information on how to identify counterfeit marks and products in the workplace:
<http://www.acil.org/associations/1304/files/OSHA%202007QuickTips.pdf>

White Paper: The Threat of Counterfeit Product Approval Marks Warrants Aggressive Detection and Enforcement Action.
Developed through the OSHA and ACIL Alliance, the White Paper provides information to help safety and health professionals and the public understand the dangers of products with counterfeit marks:
<http://www.acil.org/associations/1304/files/OSHA2007FinalWhitePaper.pdf>