

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
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Qualified Testing Laboratories

Code: 2020 Electrical Code
Sections: 90.7 & 110.3

Date: September 28, 2023

Question 1:

With respect to electrical, what is a qualified testing laboratory?

Answer 1:

A qualified testing laboratory is recognized in section 110.3(C) of the State Electrical Code (NEC with State Amendments) and Article 4 of Chapter 66 in the North Carolina General Statutes.

Since 1933, the State of North Carolina has regulated the commerce and business of all electrical materials, devices, appliances and equipment through Article 4 of Chapter 66 of the North Carolina General Statutes. Article 4 prohibits any “person, firm or corporation before selling, offering for sale, assigning, or disposing of by gift as premiums or in any similar manner any electrical material, devices, appliances or equipment” within the State prior to being “evaluated for safety and suitability for intended use.” See N.C. Gen. Stat. §§ 66-23; 66-25. “[T]his evaluation shall be conducted in accordance with nationally recognized standards and shall be conducted by a qualified testing laboratory.” N.C. Gen. Stat. § 66-25(a).

The State Electrical Division of Engineering is the section at the NC Department of Insurance that is charged with the responsibility “to approve suitable national standards and to approve suitable qualified testing laboratories” for North Carolina. See N.C. Gen. Stat. § 66-25(a). The procedures used by the State Electrical Division to approve qualified testing laboratories are the rules and regulations adopted by the North Carolina Building Code Council for “testing, evaluation, inspection, and certification services” of “a recognized independent testing laboratory”. See N.C. Gen. Stat. 143-139.1(a).

Therefore, a qualified testing laboratory is an independent entity that has satisfied the State in its ability to evaluate, test, and certify electrical equipment in accordance with national standards by means of listing and labeling as described in the State Electrical Code. It is generally accepted practice for industry professionals to commonly refer to qualified testing laboratories as third-party labs or agencies.

Question 2:

Does the State Electrical Code have the authority to direct an installer or electrical inspector to examine the safety and suitability of listed and labeled equipment including its internal wiring and components as described in sections 90.7 and 110.3(A)?

Answer 2:

N.C. Gen. Stat. § 66-25(a) states “[a]ll electrical materials, devices, appliances, and equipment shall be evaluated for safety and suitability for its intended use.” N.C. Gen. Stat. § 66-25 is always applicable to electrical equipment in the State. This statute is not dependent on the State Electrical Code or its enforcement. However, the State Electrical Code is dependent on this statute for examining the safety and suitability of the products used in an electrical system in accordance with section 90.7 and 110.3(A).

Section 90.7 of the State Electrical Code states that “[i]t is the intent of this Code that factory-installed internal wiring or the construction of equipment need not be inspected at the time of installation of the equipment, except to detect alterations or damage, if the equipment has been listed by a qualified electrical testing laboratory that is recognized as having the facilities described in the preceding paragraph and that requires suitability for installation in accordance with this Code”. Furthermore, N.C. Gen. Stat. §143-139.1 conveys that equipment “bearing such labels or seals shall be deemed to meet the requirements of the North Carolina State Building Code and this Article without further inspection . . .”

Electrical materials, devices, appliances, and equipment that comply with N.C. Gen. Stat. § 66-25 in that such products are listed and labeled by a qualified testing laboratory have satisfied the requirements of sections 90.7 and 110.3(A) of the State Electrical Code. Thus, the NEC is not applicable nor can require further examination of such listed equipment.

Question 3:

What standard applies to the internal wiring of listed and labeled components, equipment, and assemblies?

Answer 3:

The internal wiring of listed and labeled components, equipment, and assemblies are regulated by the national standard used by the qualified testing laboratory to list and label the product.

Question 4:

What should an installer, inspector, or other interested party do in the event any of the following are observed as being associated with listed and labeled equipment?

- Fire, shock or other personal injury or property damage
- Misuse or misrepresentation of a label
- Noncompliance with known listing requirements for that product
- Unauthorized or counterfeit labels
- Inappropriate or unauthorized reference(s) to a qualified testing laboratory on packaging, web sites, brochures or ads
- Application of laboratory labels to products in the field where not a certified representative of the laboratory

Answer 4:

In the event any of the aforementioned are observed, the appropriate laboratory should be notified, and a product incident report should be filed with the appropriate laboratory as deemed necessary.

Question 5:

Where can I find the list of qualified testing laboratories?

Answer 5:

A list of the qualified testing laboratories for the State of North Carolina can be found on the State Electrical Division's webpage at the link below:

<https://www.ncosfm.gov/codes/state-electrical-division/qualified-testing-laboratories>