

Conduit Certification



NSF International Conduit Certification Program

For over 50 years, NSF International has been well known and respected in the plastic piping industry for protecting public health through its standards development and testing services. The NSF Certification Mark has provided confidence to manufacturers, code/regulatory officials and consumers. Now, NSF can provide that same level of confidence for electrical safety testing of conduit pipe, fittings and bends.

NSF International's Conduit Certification Program provides listing and labeling on electrical conduit to ANSI/UL 651 Schedule 40 and 80 Rigid PVC Conduit and Fittings as well as the Canadian counterparts CSA-C22.2 No. 211.1 and No. 211.2.

The acceptance of NSF's listed and labeled electrical products is widespread and based on NSF's designation as a Nationally Recognized Testing Laboratory (NRTL) by OSHA and Standards Council of Canada (SCC) for electrical safety.

Testing and Certification

Manufacturers seeking certification of their conduit pipe, fittings and bends undergo an extensive evaluation process including:

- 1. Formulation Review and Material Testing** – PVC compounds used in the production of conduit products are evaluated for compliance with the applicable standard. NSF reviews each raw material to ensure that only compliant compounds are permitted for use in the finished product. Additionally, each compound is tested for physical properties, which include Tensile Strength, Modulus of Elasticity, Impact Resistance, Deflection Temperature, and Flammability.
- 2. Product Testing** – Finished products are subjected to testing in NSF's laboratories to verify the construction and performance of the product against the applicable performance standard. As part of the certification process, NSF tests each trade size and schedule of finished product. Testing includes:

- Tensile strength
- Deflection
- Low-temperature handling
- Water absorption
- Resistance to crushing
- Resistance to impact
- Flame resistance
- 90°C wire evaluation
- Chemical resistance
- Sunlight resistance
- Pipe stiffness
- Pull-joint separation
- Joint water tightness

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- 3. Formulation Registration** – Upon successful completion of the testing process, NSF issues a formal Authorized Registered Formulation document. This document helps ensure that manufacturers are using only authorized raw materials in the production of certified product. Only products that are manufactured according to the Authorized Registered Formulation are eligible to bear the NSF Certification Mark.
- 4. Using the NSF Certification Mark** – Upon successful certification, the NSF Mark, along with the associated standard, may be placed on the print string of the approved conduit products, like so:

NSF NRTL UL 651

In addition, listed manufacturer names and product model numbers will be included on the NSF listings website, accessible via www.nsf.org/info/listings.

The NSF listings website provides a full list of certified conduit manufacturers along with detailed product descriptions.

Annual Monitoring

Certified conduit products are certified under NSF/ANSI Standard 14 – Plastics Piping System Components and Related Materials, which employs a thorough monitoring policy to ensure quality manufacturing through facility inspections and product testing:

- **Facility Inspection** – Four unannounced audits are conducted every year, which include:
 - Verification of authorized raw materials to approved formulations
 - Verification and observation of quality control testing requirements
 - Verification of product compliance with standards and NSF policies
- **Annual Testing** – During NSF’s facility inspections, samples of NSF-certified products are collected for annual monitoring testing

Contact Us

For more information about the NSF Conduit Certification Program, call 1.800.NSF.MARK (US, 1.800.673.6275), or email plumbing@nsf.org.