

Do cable tray supports need to be waterproofed



Overview

A Guide to Installing and Supporting Electrical Cable Trays For environments with corrosive chemicals or high moisture, composite cable trays made from fiber.

Key Takeaways

Cable tray supports generally do not need to be waterproofed, as the cables themselves are designed for open-air exposure, but environmental conditions may require corrosion-resistant materials or protective coatings.

Key Considerations

Cable tray supports are structural elements that hold and route electrical cables. According to industry guidance, supports themselves are not typically waterproofed because the cables installed in trays are rated for open-air environments and have durable outer jackets to withstand moisture and weather exposure. The National Electrical Code (NEC) does not mandate waterproofing of supports, but it does require that cable trays and their supports be suitable for the environment in which they are installed.

Environmental Protection

While waterproofing is not required, environmental factors such as high humidity, corrosive chemicals, or outdoor exposure may necessitate the use of corrosion-resistant materials for supports. Common options include:

- Aluminum: Lightweight and naturally corrosion-resistant due to its oxide layer.

- Galvanized or stainless steel: Provides durability and resistance to rust in outdoor or industrial environments .
 - FRP (Fiberglass-Reinforced Plastic): Non-conductive and highly resistant to moisture and chemical corrosion, ideal for harsh or wet environments .
- Waterproofing and IP Ratings

Cable trays themselves can be tested for water and dust protection using standardized methods such as immersion, rain, high-pressure water jet, and condensation tests . These tests ensure that the tray system can withstand environmental exposure, but the supports are generally not the focus of waterproofing. Instead, selecting materials that resist corrosion and degradation is the recommended approach.

Practical Guidance

- For indoor, dry environments, standard steel or aluminum supports are sufficient.
- For outdoor or high-moisture areas, use corrosion-resistant materials or coatings to extend the lifespan of the supports.
- Ensure that cable trays and supports comply with NEC requirements and manufacturer specifications for load capacity and environmental suitability .
- Regular inspection and maintenance can prevent corrosion-related failures even without waterproofing. Conclusion: Cable tray supports do not need to be waterproofed in most installations. Focus on selecting materials and finishes that resist corrosion and are appropriate for the environmental conditions, while ensuring the cables themselves are rated for open-air exposure and protected against moisture .

Article Content

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Despite their versatility, cable trays are not suitable for every situation. They are strictly prohibited in hoistways or any

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Answer: No. Cable trays are a support system for electrical cables, power, signal, and communication and optical fiber cables. NEC

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Answer: No. Cable trays are a support system for electrical cables, power, signal, and communication and optical fiber cables. NEC

NEC Article 392 Guide: Ensuring Compliance for Cable Tray Systems

The short answer is no. Due to their exposure to the open air because of the cable trays, the wires contained within

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Per the National Electrical Code, a cable tray system is “a unit or assembly of units or sections and associated fittings forming a rigid

V.C. Summer Nuclear Station, Units 2 and 3, Rev. 3 to Updated

The cable tray test program conducted by ANCO Engineers Inc. included more than 2000 dynamic tests of representative cable tray

LEGRAND CABLE TRAYS TECHNICAL GUIDE

Not all cable trays are equivalent. The mechanical and electrical characteristics, tests, certifications, overall quality management,

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We get this question a lot. The safety of your people and the reliability of your electrical system depend on proper

Cable tray

In the electrical wiring of buildings, a cable tray system is used to support insulated electrical cables used for power distribution,

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Grounding and bonding of cable trays There are three wiring options for providing an EGC in a cable tray wiring

conduits to cable tray | Page 2 | Mike Holt's Forum

Let me throw out a scenario: I have a Tray 12 ft above grade. I have another Tray 10ft above grade, but 25 ft from, the

NEMA Standards Publication VE 2-2006

In order to install the cable tray supports, first find the required elevation from the floor to the bottom of the cable tray and establish a

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Do not use a cable tray as a walkway, ladder, or support for people; a cable tray is a mechanical support system for cables and

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