

# National Standard for Galvanized Coating of Cable Trays

## Article Overview

The national standard for galvanized cable trays typically requires hot-dip galvanizing with a zinc coating thickness of 45-55  $\mu\text{m}$  (325-460  $\text{g}/\text{m}^2$ ), depending on tray thickness and environmental conditions.

## Zinc Coating Requirements

For hot-dip galvanized (HDG) steel cable trays, the standard specifies a minimum zinc coating thickness of 45  $\mu\text{m}$  (corresponding to a coating mass of 325  $\text{g}/\text{m}^2$ ) for typical tray sheets of 1.5-3 mm thickness, while heavier components like brackets may require  $\geq 55 \mu\text{m}$  ( $\geq 460 \text{ g}/\text{m}^2$ ) to ensure corrosion resistance. Electro-galvanized trays have a lower minimum thickness of 12  $\mu\text{m}$ , suitable only for dry indoor environments due to limited corrosion protection.

## Standards and Specifications

- o T/CECS 31-2017 defines technical specifications for steel cable trays, including galvanizing processes and zinc layer thickness.
- o NEMA VE-1 and ASTM A123/A123M are commonly referenced for metallic cable trays, specifying hot-dip galvanizing after fabrication with a coating grade of 65 and an average zinc weight of 460  $\text{g}/\text{m}^2$  per side (0.065 mm thickness).
- o GB/T 26941.1-2011 applies to electro-galvanized trays, while hot-dip galvanizing is preferred for outdoor or corrosive environments due to superior adhesion, compactness, and durability.

## Environmental Considerations

The required zinc thickness depends on service conditions:

- o Indoor, dry environments: Electro-galvanized trays with 12  $\mu\text{m}$  zinc may suffice.
- o Outdoor or marine environments: Hot-dip galvanized trays with  $\geq 275 \text{ g}/\text{m}^2$  (39  $\mu\text{m}$ ) coating mass are recommended to prevent white rust during transport and storage.
- o Highly corrosive or alkaline/acidic conditions: Hot-dip galvanizing after fabrication is mandatory, and damaged areas must be repaired with compatible materials to maintain coating integrity.

## Quality and Appearance

The galvanized coating should be continuous, uniform, and smooth, with minor dull or light grey areas permissible. Defects such as bare spots, blisters, rough nodules, or excessive zinc dross are not allowed. Coating adhesion is verified through tests like the mandrel wrap test, and copper sulfate tests ensure coating

density .

## Summary

For compliance with national standards:

- o Use hot-dip galvanizing for outdoor or corrosive environments.
- o Ensure minimum zinc thickness of 45-55 um depending on component size and exposure.
- o Electro-galvanized trays are limited to indoor, dry conditions.
- o Follow NEMA VE-1, ASTM A123/A123M, T/CECS 31-2017, and local standards for fabrication, coating, and repair procedures . This ensures durable corrosion protection, long service life, and adherence to national and international specifications.

Explore the ultimate guide to cable trays surface treatment, covering galvanization, HDG,

The document provides a technical data sheet for cable trays including ladder and perforated types. It lists specifications for material,

Cable-Tray\_Technical-Guide - Free download as PDF File (.pdf), Text File (.txt) or view presentation slides online. This document

UL 568, Nonmetallic Cable Tray Systems This standard specifies the requirements for nonmetallic cable trays and associated fittings

Discover cable tray finishes like galvanized coatings, powder coating, and stainless steel, designed to protect against

The National Electrical Manufacturers Association (NEMA) also publishes three consensus standards that apply to the proper

Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules of Canadian

The document specifies requirements for cable trays, including that they be fabricated from galvanized sheet steel in standard

EAE cable trays and ladders provide high-strength cable protection that protects the cables from external factors. EAE cable trays

# National Standard for Galvanized Coating of Cable Trays

**MILL GALVANIZING** When it comes to wire mesh cable tray, there can be some legitimate confusion surrounding the finishes that

IEC 61537:2023 specifies requirements and tests for cable tray systems and cable ladder systems intended for the support and

This document discusses material and finish standards for cable tray selection. It describes the advantages of aluminum, steel, and

HDG Cable Tray Specification with Self-Healing Zinc Coating - Free download as Word Doc (.doc / .docx), PDF File (.pdf), Text File

**GALVANISED CABLE TRAY SUPPORT SYSTEM (WELDED):** Hot dip Galvanized MS channels and angles listed in the BOQ

**Types of Cable Tray According to Coating Type.** Explore the different types of cable trays based on coating types, including

It specifies that cable trays shall be constructed from hot-dipped galvanized mild steel with a minimum thickness of 1.5mm. Tray

Web: <https://www.kremgroup.co.za>

