# Cable Tray Standards Comparison — EN 61537 vs NEMA VE 1 vs IEC 61537

cBallast Technical Sourcing · Cable tray, ladder tray, mesh tray, wire basket · issued 2026-07-14 · cballast.com/documents/cable-tray-standards-en-61537-nema-ve-1-comparison

Cable tray, ladder tray and mesh basket standards comparison between European (EN 61537 / IEC 61537), North American (NEMA VE 1 / NEMA VE 2) and offshore (NORSOK M-501 coating). Covers load-class designation (SWL — Safe Working Load), support spacing, safety factor, corrosion coating options (pre-galvanised, hot-dip galvanised BS EN ISO 1461, magnelis, stainless 304 / 316), fire-integrity classification, and side-rail depth vs span selection tables. Includes translation between EN 61537 numeric class (5, 6, 8, 10, 12, 15, 20, 30) and NEMA VE 1 alphabetic class (A, B, C).

## Governing standards

Region | Standard | Scope |

Europe | EN 61537 : 2007 | Cable tray systems and cable ladder systems for electrical installations |

International | IEC 61537 : 2006 | Identical technical content to EN 61537 |

North America | NEMA VE 1 : 2017 | Metallic cable tray systems |

North America installation | NEMA VE 2 : 2013 | Installation guidelines for cable tray |

North Sea offshore | NORSOK M-501 | Surface preparation and protective coating |

## Load class — EN 61537 numeric vs NEMA VE 1 alphabetic

EN 61537 assigns a numeric class matching the safe working load (SWL) in kg/m at the standard support spacing. NEMA VE 1 uses an alphabetic class letter tied to a load in lbs/ft at 20-foot span. The two schemes are not identical — a NEMA Class 20A tray is not the same as an EN 61537 Class 20 tray — but they can be cross-referenced within a design margin as shown below.

EN 61537 class | SWL (kg/m) | Approx NEMA VE 1 |

5 | 5 | — |

6 | 6 | — |

8 | 8 | Light (Class 8A / 12A) |

10 | 10 | — |

12 | 12 | Class 12A / 12B |

15 | 15 | Class 16A |

20 | 20 | Class 20A / 20B |

30 | 30 | Class 20B heavy |

## Support spacing test — how the class is proven

Both standards derive the SWL from a laboratory point-load test with the tray simply supported. The test spans specified in each standard differ. EN 61537 tests at spans 1.5 m, 2.0 m, 3.0 m, 4.5 m, 6.0 m; the manufacturer publishes a curve of allowable UDL against span. NEMA VE 1 tests at 8, 12, 16, 20 and 24 feet. Design practice is to enter the tray manufacturer's curve at the intended cable weight and support spacing, apply a safety factor of 1.5, and confirm the SWL exceeds the design load.

## Coating options

Coating | Standard | Typical service life (C3 environment) | Use |

Pre-galvanised (Sendzimir) | EN 10346 DX51D+Z275 | < 5 years | Dry indoor |

Hot-dip galvanised (after fabrication) | BS EN ISO 1461 (85 µm) | 10-20 years | Outdoor, marine sheltered |

Magnelis (Zn-Al-Mg) | EN 10346 ZM310 | 15-30 years | Outdoor, moderate corrosion |

Stainless 304 / 1.4301 | EN 10088-2 | > 30 years indoor | Chemical, food, offshore topside |

Stainless 316 / 1.4401 / 1.4404 | EN 10088-2 | > 30 years marine | Marine offshore, chloride exposure |

Duplex 2205 / 1.4462 | EN 10088-2 | > 30 years aggressive | Offshore FPSO, splash zone |

## Fire-integrity classification

Cable trays that must maintain the cables in service during a fire (e.g. emergency lighting, fire pump feeder) are classified under the local building code and confirmed by third-party test to BS 6387 or IEC 60331. The tray itself does not need special certification, but the fixings and the run of continuous cable within the tray do.

## Related lines on cBallast

## Wibe Group cable tray

## nVent HOFFMAN cable management

## Øglænd System offshore tray

## Cable management category

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