



# Things to know Nylon 66 Cable Ties



## Technical Breakdown

A nylon cable tie is a one-piece injection moulded fastener featuring an integral moulded pawl that provides a solid ratcheting mechanism against the serrations of the tail. This "pawl and strap" design is the worldwide industry standard, ensuring that once secured, no slippage can occur. For professional electrical work, the material choice is the most critical factor. We only use Nylon 66 (Polyamide 66) because it offers far superior mechanical strength, rigidity, and hardness compared to the cheaper Nylon 6 ties often found in the marketplace. While Nylon 6 is a softer plastic that can become dimensionally unstable, our Nylon 66 ties offer high dimensional stability even under increased temperatures. They are UL approved and are self-extinguishing to UL94-V2, with an operating temperature range of -40°C to 85°C. Safety is paramount; both our natural and black ties are Zero Halogen. In a fire, Nylon 66 exhibits significantly reduced smoke and fume emissions compared to materials like PVC or PP, greatly reducing health dangers from toxic fumes. Furthermore, we do not compromise on size. While inferior products are often sold at 4.6mm to save on material, our standard ties are a full 4.8mm wide. This ensures they meet the published minimum loop tensile strength and provides a wider surface area that won't bite into cable insulation.

**How to Choose** - Selecting the correct tie depends entirely on your installation environment: Indoor Use: Natural (white) ties are the industry standard for indoor wiring and panels. Outdoor Use: You must use black ties for any application exposed to sunlight. Our black Nylon 66 ties feature improved UV stability. High UV Exposure: For prolonged outdoor exposure, we offer UV Stabilised PA66 ties (ASTM D6779) containing 2% carbon black, providing significantly longer resistance to radiation damage than standard ties. Load Requirements: For light bundles, 2.5mm or 3.6mm widths are suitable. For main power cables or conduit, the 4.8mm width is the professional benchmark for a guaranteed 22.2kg (50lb) hold.

**Best Practices** - Nylon 66 is a thermoplastic that is hygroscopic, meaning it requires a specific moisture content to maintain its high abrasion resistance and flexibility.

**Storage:** Always keep ties in their sealed bags until use. If left open in a dry or hot environment, they can lose moisture and become brittle.

**Tensioning:** While they can be installed by hand, using a tensioning tool ensures consistent strength and cuts the tail flush. **Safety:** Never leave sharp "pigtails" after cutting, as they pose a significant injury risk in crowded panels. Always ensure the smooth side of the strap is seated against the cable insulation.

### Q Why is Nylon 66 better than the cheaper Nylon 6 cable ties?

**A** Nylon 66 has a higher melting point and resists "creep," which is when plastic stretches under a load. Cheaper Nylon 6 ties often loosen up when a cabinet gets warm. Nylon 66 stays tight for the life of the install.

### Q Are these ties safe for use in public builds?

**A** Yes, because they are zero halogen. In a fire, they won't release the toxic gases that standard halogenated plastics do. This is a mandatory safety spec for many rail and public sector projects. Also consider using Low Smoke ties in applications where fire safety and visibility are critical, as these are designed to emit very limited smoke if ignited.

### Q Does the difference between 4.6mm and 4.8mm really matter?

**A** Yes it does. That extra width is the difference between hitting a 22.2kg rating or failing. 4.6mm ties are made to save on material costs, but they won't stand up to the same vibration or pull force as a true 4.8mm tie.