



Remora Electrical

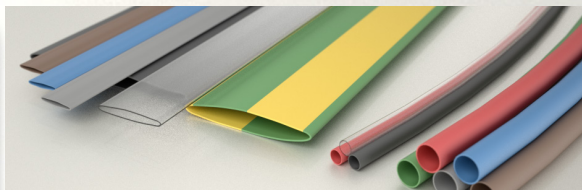
Things to know Heatshrink Sleeving

Technical Breakdown

Heatshrink sleeving doesn't get much attention, yet it's one of the most reliable ways to protect and tidy up electrical connections. It starts out as a flexible plastic tube that has been expanded during manufacturing. Once heat is applied, usually from a heat gun, it contracts tightly around the wire, connector, or joint, forming a tough protective layer. The result is a clean, sealed finish that guards against moisture, vibration, and wear.

Different materials and shrink ratios are used depending on where it's installed. Polyolefin is the standard choice for most jobs because it's flexible, flame retardant, and easy to work with. In tougher environments—like automotive, offshore, or industrial systems—adhesive-lined (dual-wall) tubing is often preferred because the melted liner creates a waterproof bond. High-temperature fluoropolymers such as PTFE are reserved for demanding electrical or chemical applications where heat resistance is key.

Heatshrink comes in ratios such as 2:1 or 3:1, showing how much it will reduce in size. A 3:1 sleeve that starts at 30mm wide will close down to 10mm when heated. Once cooled, it stays in place permanently, improving insulation and extending cable life. With the right fit and careful application, it offers a simple, low-cost way to boost safety and performance in any electrical setup.



How to Choose - Picking the right heatshrink depends on the job, the cable size, and the conditions around it. Start with the material—standard polyolefin suits most indoor and light-duty use. For areas exposed to water, oil, or outdoor elements, go for adhesive-lined tubing. Where high heat or chemicals are an issue, PTFE or FEP is a better option.

Next, match the shrink ratio to the cable diameter. Make sure it fits snugly once shrunk but not so tight that it distorts. Always check the expanded and recovered dimensions before cutting. And if your installation involves vibration or regular movement, choose a thicker-walled or flame-retardant version to make sure it lasts.

Best Practices - Getting a good seal is all about preparation and even heat. Cut the tubing a little longer than needed—heatshrink shortens slightly when it contracts. Slide it over the connection so it overlaps both sides of the joint for full coverage.

Use a proper heat gun, not a lighter or open flame, to avoid scorching the material. Keep the gun moving so the heat spreads evenly. You'll see the tubing start to tighten and conform to the shape underneath. For adhesive-lined versions, continue heating gently until the inner glue flows out slightly at the edges. Let it cool naturally before handling.

Inspect for air bubbles, uneven spots, or areas that haven't shrunk. Taking a few extra seconds at this stage ensures the insulation stays sealed and reliable for years.

Q What shrink ratio should I choose for heatshrink sleeving?

A As a rule of thumb, select a shrink ratio that allows the tube to slide easily over the largest part of your assembly, while still recovering tightly on the smallest section. For general cabling, 2:1 is often sufficient.

Q Can heatshrink sleeving be used in high-temperature environments?

A Yes, provided the material is suited to the conditions. Standard polyolefin performs up to around 125°C, while PTFE and other fluoropolymers withstand continuous service temperatures of 200 °C or higher.

Q How do I apply heatshrink sleeving properly without damaging wires?

A The key is controlled, even heating. A hot air gun is preferable, applied in a slow rotation to avoid hotspots. Overheating can thin the material or scorch insulation. Keep the heat moving, watch for uniform shrinkage and allow time for cooling before handling.