

# SEALING AND PROTECTION IN WIRE HARNESS APPLICATIONS

In demanding electrical environments, wire harnesses must deliver consistent performance, protection, and durability. TE Connectivity's heat shrink tubing solutions are engineered to meet these challenges by providing robust insulation, environmental sealing, and mechanical strain relief. Designed for a wide range of industries—including automotive, aerospace, industrial, and telecommunications—these products help streamline harness assembly while safeguarding against abrasion, moisture, and chemical exposure. With a broad portfolio tailored to diverse specifications, TE's heat shrink tubing plays a critical role in enhancing the longevity and reliability of modern wire harness systems.

# TRENDS IN HEAT SHRINK TUBING



## **Electrification & High Voltage**

Growing demand in EVs and renewable energy systems for high-voltage insulation and protection



### **Advanced Materials** Innovations in cross-linked

polymers for higher temperature and chemical resistance





### Automation-ready tubing designs for faster, more

**Smart Manufacturing** 

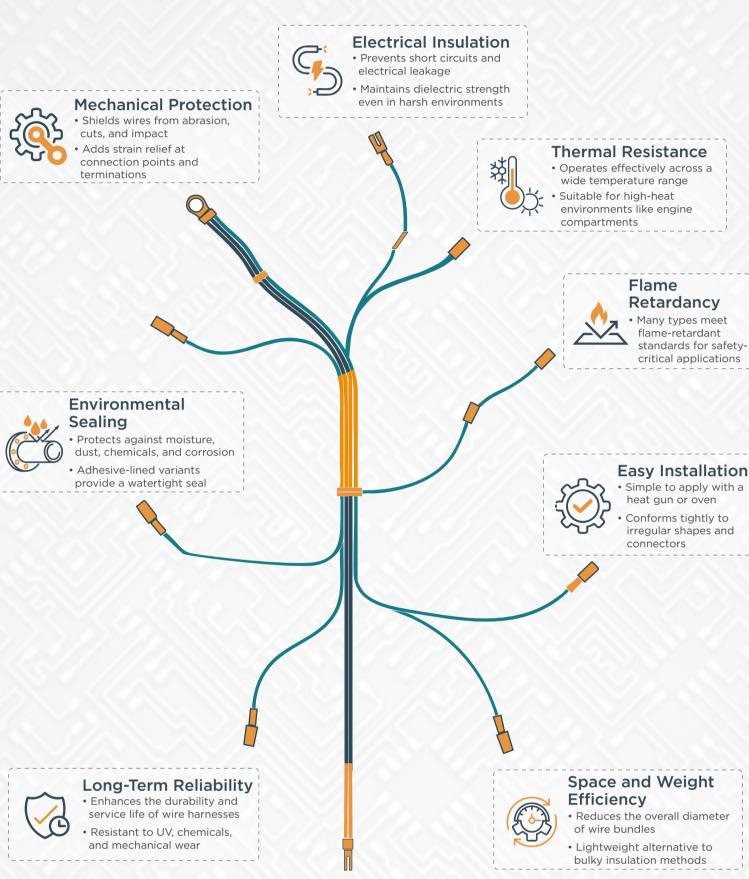
consistent installation



### Connectivity & Data Protection for data and sensor cables in connected systems

and smart infrastructure

# BENEFITS OF HEAT SHRINK TUBING IN WIRE HARNESS APPLICATIONS



**Improved Aesthetics** and Organization Neatly bundles wires for a clean, professional appearance Available in multiple colors for easy circuit identification

# **APPLICATIONS OF**

**HEAT SHRINK TUBING** 



# heat, abrasion, and vibration

**Automotive** 

**Engine Bays** 

**Aerospace Systems** 

Protects hoses and wiring from



Marine & Offshore

Seals and protects cables from

insulation of aircraft wiring

Provides lightweight



saltwater and corrosion

Renewable Energy Protects wiring in solar and

wind power installations



**Electric Vehicles** 

cables and connectors

Insulates and seals high-voltage

**Industrial Automation** Protects sensor and control wiring in harsh factory environments



# wires in diagnostic and surgical equipment

**Medical Devices** 

Insulates and organizes

Seals and organizes fiber optic and data cables

**Telecommunications** 



**Speciality Tubing** 

rated - high temperature

· Abrasion resistant

• Greater than 150°C

environments

- Single Wall Tubing
- · Bundling protection Abrasion resistant
- Variety of colors available for coding

· Quick installation

Strain relief

- Low shrink temperature MIL-SPEC
- Meets UL VW1 -
- flammability Meets UL/CSA -

electrical insulation

- Cost effective • UL rating - minimize

catastrophic failure of a system



# · Cable repair bonding & sealing

 Splice sealing Direct burial water -

**Dual Wall Tubing** 

• Waterproof - submersion

- proofing • Meets UL VW - 1 flammability rating
- Electrical insulation
- MIL-SPEC
- of a system

# catastrophic failure

• UL rating - minimize

## Fungal and mold protection

- UL rating minimize catastrophic failure
- of a system • Flame retardant
- · Water, heat and humidity resistant
- MIL-SPEC

## · Flexible design and easy to install

higher voltage

**High Voltage Tubing** 

 EV orange color for easy identification of

- Lightweight material design · Excellent insulation
- · Does not propagate burning (UL224)

· Can fit over both

components and cables Deliver optimum thermal stability

Robust electrical

resistivity



