VOLINSU TUBING: EVDW

ELECTRIC VEHICLE, DUAL WALL TUBING (EVDW)

PRODUCT BENEFITS

- Orange color (RAL-2003 color) to meet EV visual requirements
- 3:1 heat shrink ratio
- Excellent flame retardancy
- High dielectric strength, withstand in harsh environment tests of high conditional reliability following abrasion, heat ageing, and water immersion
- Good thermal stability. Electrical and mechanical properties are uncompromised after 168hrs at 158°C (in accordance with ASTM D2671)
- Provides good bonding strength to substrates incl. aluminum, copper, XLPE, and PVC

The VOLINSU electric vehicle dual wall (EVDW) heat shrink tubing has been designed from a flame-retardant material with excellent electrical properties and excellent insulation and allows use over both simple and intricate shapes. Electric vehicles (EV) require components to operate at high temperatures and high voltage, not propagate burning, and help with the identification of HV circuitry. The new VOLINSU dual wall tubing for EVs from TE Connectivity (TE) can address the unique challenges of EV applications and has been specifically designed to insulate and protect high-voltage conductive components and cables for operational reliability, whilst enhancing the system's safety.

The EVDW tubing is available in sizes designed to work with the cable and component sizes used in the power train of electric vehicles. It is made from a modified polyolefin material which means it is semi-flexible and easy to install using already available tooling.

MATERIAL PROPERTIES AND TEMPERATURE RATING

- Material outer: Irradiated polyolefin jacket
- Material inner: Thermoplastic adhesive
- Shrink ratio: 3:1
- The minimum full recovery temperature is: 110°C
- Full Recovery Temperature: 130°C
- Continuous operating temperature: -40°C to 105°C (jacket -40°C to 125°C)
- Voltage system: rated for 1000V

SPECIFICATIONS

- Type: VOLINSU EVDW tubing
- Raychem: 108-120072
- Does not propagate burning as specified in UL224 conducted internally at TE

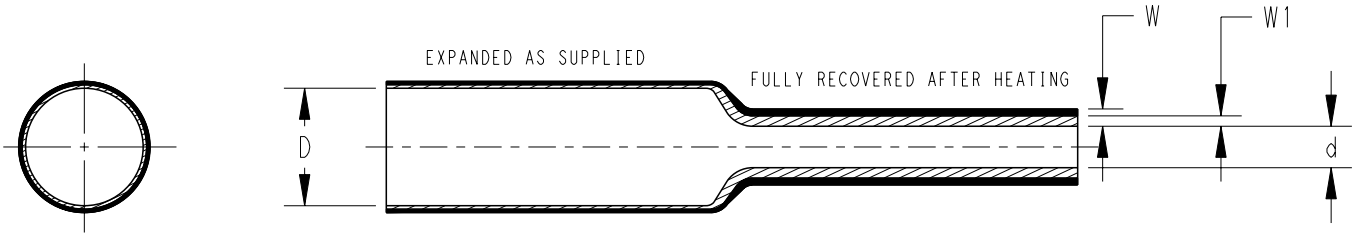
MARKETS AND APPLICATIONS

- Automotive
- Industrial & Commercial Transportation
- Charge Inlet
- Electric Control Unit
- Electric Driving System
- Harness in Charge Station

PRODUCT PERFORMANCE

- **High voltage identification:** orange color for visual identification of high voltage circuits
- **Electric insulation:** excellent dielectric strength for electric insulation in high-voltage environments and thinner wall
- **Flame retardant:** does not propagate burning as specified in UL224 standard (testing conducted internally at TE)
- **Durability:** Durable in high heat environments, helps to protects against premature failure of the covered component
- **Ease of use:** large shrink ratio and good flexibility enable quicker assembly

DIMENSIONS



Size		Inside diameter as supplied (min) - D		Inside diameter after recovery (mix) - d		Total wall thickness after recovery - W						Minimum recovered adhesive wall thickness - W1	
						Minimum		Maximum		Nominal			
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
9/3	0.354/0.118	9.00	0.354	3.00	0.118	1.15	0.045	1.65	0.065	1.40	0.055	0.56	0.022
12/4	0.472/0.157	12.00	0.472	4.00	0.157	1.42	0.056	2.14	0.084	1.78	0.070	0.58	0.023
19/6	0.748/0.236	19.00	0.748	6.00	0.236	1.75	0.069	2.75	0.108	2.25	0.089	0.58	0.023
24/8	0.945/0.315	24.00	0.945	8.00	0.315	2.04	0.080	3.04	0.120	2.54	0.100	0.79	0.031
40/13	1.575/0.512	40.00	1.575	13.00	0.512	2.04	0.080	3.04	0.120	2.54	0.100	0.86	0.034

Note: Dimensions shown mm (inches).
**Wall thickness will be less if tubing recovery is restricted during shrinkage.

ORDERING INFORMATION	
Color	EV Orange (-3)
Size selection	Always order the largest size that will shrink snugly over the component being covered
Standard packaging	STK(PC); SPOOLS(Meter)
Marking	Surface Mark
Ordering description	Specify product name, size, color, and finishing type; for example, EVDW-24/8-3-STK

Note: Please refer to the spool length document for details on spool length for each size of the product family.

Learn more: TE.com/heatshrinktubing

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