

## -- Universal heat shrink tubing --



## SW-105 (2X)

105°C low-temperature, non self-extinguishing, flexible heat shrink tubing; Shrink ratio 2:1

### Applications

SW-105 offers an excellent balance of electrical, mechanical, and thermal properties. Shrink starts at 70°C, which makes it ideal for quick insulating and bundling of wire harnesses and components.

### Features

- Halogen free
- Shrink ratio 2:1
- Initial shrinkage temperature:  $\geq 70^{\circ}\text{C}$
- Fully shrink temperature:  $\geq 105^{\circ}\text{C}$
- Continuous operating temperature:  $-55^{\circ}\text{C}$  to  $105^{\circ}\text{C}$

### Specification/Standards

| UL    | CAN/CSA          | RoHS |
|-------|------------------|------|
| UL224 | C22.2 NO198.1-99 | ✓    |

### Typical Properties

| Property                                 | Test Method | Typical Performance |
|------------------------------------------|-------------|---------------------|
| Tensile Strength (MPa)                   | ASTM D 2671 | $\geq 10.4$         |
| Ultimate Elongation (%)                  | ASTM D 2671 | $\geq 200$          |
| Tensile Strength after Heat Aging (MPa)  | 136°C x168h | $\geq 7.3$          |
| Ultimate Elongation after Heat Aging (%) | 136°C x168h | $\geq 100$          |
| Voltage Withstand                        | 2500V, 60s  | No breakdown        |
| Dielectric Strength (kV/mm)              | ASTM D 149  | $\geq 15$           |
| Volume Resistivity (ohm-cm)              | ASTM D 876  | $\geq 10^{14}$      |

### Standard Sizes and Dimensions

| Ordering Size in. (mm) | Expanded I.D. (Minimum) mm | Recovered I.D. (Maximum) mm | Recovered Wall Thickness (Normal) mm |
|------------------------|----------------------------|-----------------------------|--------------------------------------|
| 3/64 (0.9)             | 0.9±0.2                    | 0.50                        | 0.22                                 |
| (1.1)                  | 1.1±0.2                    | 0.65                        | 0.28                                 |
| 1/16 (1.5)             | 1.5±0.2                    | 0.85                        | 0.32                                 |
| (2)                    | 2.0±0.2                    | 1.00                        | 0.35                                 |
| 3/32 (2.5)             | 2.5±0.2                    | 1.30                        | 0.38                                 |
| (3)                    | 3.0±0.2                    | 1.50                        | 0.40                                 |
| 1/8 (3.5)              | 3.5±0.2                    | 1.80                        | 0.42                                 |
| (4)                    | 4.0±0.2                    | 2.00                        | 0.50                                 |
| (4.5)                  | 4.5±0.2                    | 2.30                        | 0.55                                 |
| 3/16 (5)               | 5.0±0.2                    | 2.50                        | 0.55                                 |
| (5.5)                  | 5.5±0.2                    | 3.00                        | 0.55                                 |
| 1/4 (6)                | 6.5±0.2                    | 3.50                        | 0.60                                 |
| 5/16 (7)               | 7.5±0.3                    | 4.00                        | 0.60                                 |
| (8)                    | 8.5±0.3                    | 4.50                        | 0.60                                 |
| 3/8 (9)                | 9.5±0.3                    | 5.00                        | 0.60                                 |
| (10)                   | 10.5±0.3                   | 5.50                        | 0.60                                 |
| (11)                   | 11.5±0.3                   | 6.00                        | 0.65                                 |
| 1/2 (12)               | 12.5±0.3                   | 6.50                        | 0.65                                 |
| (13)                   | 13.5±0.3                   | 7.00                        | 0.70                                 |
| (14)                   | 14.5±0.3                   | 7.50                        | 0.70                                 |
| 5/8 (15)               | 15.5±0.4                   | 8.00                        | 0.70                                 |
| (16)                   | 16.5±0.4                   | 8.50                        | 0.80                                 |
| (17)                   | 17.5±0.4                   | 9.00                        | 0.80                                 |
| 3/4 (18)               | 19.0±0.5                   | 10.0                        | 0.80                                 |
| (20)                   | 21.0±0.5                   | 11.0                        | 0.90                                 |
| (22)                   | 23.0±0.5                   | 12.5                        | 0.90                                 |
| 1 (25)                 | 26.0±0.5                   | 14.0                        | 0.95                                 |
| (28)                   | 29.0±0.5                   | 15.0                        | 1.00                                 |
| 1-1/4 (30)             | 31.5±1.0                   | 17.5                        | 1.00                                 |
| (35)                   | 36.5±1.0                   | 20.0                        | 1.00                                 |
| 1-1/2 (40)             | 41.5±1.0                   | 22.5                        | 1.00                                 |
| (45)                   | 46.0±1.0                   | 25.0                        | 1.00                                 |

---

# Elenets®

## Heat Shrink Tubing and Devices

### Product Catalog

#### Single-Wall Polyolefin Tubing

**Universal Heat Shrink Tubing**

- ES (2X) .....  
Flame-retardant, universal heat shrink tubing with excellent physical and mechanical properties.
- ES (3X) .....  
Flame-retardant, universal heat shrink tubing with excellent physical and mechanical properties.
- TS (2X) .....  
Ultra thin wall, very flexible, flame-retardant heat shrink tubing.
- SW-105 (2X) .....  
105°C low-temperature, non self-extinguishing, flexible heat shrink tubing.
- SW-150 (2X) .....  
150°C flame-retardant, flexible heat shrink tubing.

**Military Spec Heat Shrink Tubing**

- SF-135 (2X) .....  
Flame-retardant, flexible, multi-purpose, Military Spec heat shrink tubing.
- SF-135 (3X) .....  
Flame-retardant, flexible, multi-purpose, Military Spec heat shrink tubing.

#### Dual Wall (Adhesive-Lined) Tubing

**Flexible Adhesive-Lined Polyolefin Tubing**

- DE (2X) .....  
Flexible, adhesive-lined, polyolefin heat shrink tubing.
- DE (3X) .....  
Flexible, adhesive-lined, polyolefin heat shrink tubing.

---

DE (4X) .....  
Flexible, adhesive-lined, polyolefin heat shrink tubing.

**Military Spec Adhesive-Lined Heat Shrink Tubing**

DF-135 (3X) .....  
Highly flame-retardant, flexible, adhesive-lined, Military Spec polyolefin heat shrink tubing.

DF-135 (4X) .....  
Highly flame-retardant, flexible, adhesive-lined, Military Spec polyolefin heat shrink tubing.

**Heat Shrink Tubing For Automotive Wiring Harnesses**

DW-R (4X) .....  
Semi-rigid, high shrink ratio, adhesive-lined heat shrink tubing for automotive wiring harnesses.

DW-RF (4X) .....  
Highly flame-retardant, semi-rigid, adhesive-lined heat shrink tubing for automotive wiring harnesses.

DW-L (4X) .....  
Low-temperature, adhesive-lined heat shrink tubing for automotive wiring harnesses.

**Heat Shrink Tubing For Automotive Oil-Pipe Protection**

DW-O .....  
Adhesive-lined, heat shrink tubing for automotive oil-pipe protection.

**Thick Adhesive-Lined Polyolefin Tubing**

DTK (3X) .....  
Thick-wall, low-temperature adhesive-lined, flexible, polyolefin heat shrink tubing.

**Heat Shrink End Caps And Repair Sleeve**

HSDW-CAPS (4X) .....  
Adhesive-lined, heat shrinkable insulating caps.

HSDW-CAPSR (4X) .....  
Semi-rigid, adhesive-lined, heat shrinkable insulating caps.

HSDW-CT (4X) .....  
Semi-rigid adhesive-lined heat shrink insulation connectors.

HSDW-TAPE (1.4X) .....  
Adhesive-lined, cross-linked polyolefin heat shrink tape.

## Medium and Heavy-Duty Tubing

**Medium-Duty Tubing**

MEE .....  
Flame-retardant, medium wall, adhesive-lined heat shrink tubing.

---

MEE-R .....  
Semi-rigid, high resistance, medium wall, adhesive-lined heat shrink tubing.

**Heavy-Duty Tubing**

HEE .....  
Flame-retardant, heavy wall, adhesive-lined heat shrink tubing.

HEE-R .....  
Semi-rigid, high resistance, heavy wall, adhesive-lined heat shrink tubing.

**Heat Shrinkable Busbar Insulation Tubing**

FBTM .....  
Flexible medium wall 1~25kV busbar insulation tubing.

FBTH .....  
Flexible 35kV busbar insulation tubing.

**Special Purpose Tubing**

TFE .....  
PTFE Teflon tubing.

TFE200 (1.7X) .....  
Heat shrink Teflon tubing.

W150 (2X) .....  
Diesel resistant, flexible, elastomeric heat shrink tubing.

GT200 (2X) .....  
Thin wall, fluoroelastomer heat shrink tubing.

---

## **Important Notice**

All statements, technical information, and recommendations related to Elenets' products are believed to be reliable, but the accuracy or completeness is not guaranteed. We highly recommend that you evaluate and determine if it is suitable for your intended application before using this product. Elenets assume no risk and liability associated with the use of this material. Any statements related to the product which are not contained in the current Elenets printed publications, online literature, or any contrary statements referenced on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of Elenets.

## **Warranty; Limited Remedy; Limited Liability**

Elenets' product warranty is stated in its Product Literature available upon request. Elenets makes no other warranties including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose. In no instance will Elenets be liable for any eventual, indirect or consequential damage or damages arising from the sale, resale, transfer, use or misuse of the product. Elenets' specifications are subject to change without notice, including changes in materials and processing that do not affect compliance of the products specification. If this product is defective within the warranty period stated above, your exclusive remedy shall be, at Elenets' option, to replace or repair the product or refund the purchase price of the Elenets' product.

## **Elenets General Electronics Corp.**

8605 Santa Monica Blvd

Suite 25826

Los Angeles, CA 90069-4109

Email: [sales@elenets.com](mailto:sales@elenets.com)

[www.elenets.com](http://www.elenets.com)

|                                                                          |
|--------------------------------------------------------------------------|
| Copyright ©2018 Elenets General Electronics Corp.<br>All right reserved. |
|--------------------------------------------------------------------------|