



RAYCHEM

TE Internal #: 4611264003

Black, 2:1, Shrinks To .472 in [12 mm], Chlorinated Polyolefin, Pre-Coated Wrap Jacket Wall Material, .945 in [24 mm] Inner Diameter, Flame-Retardant

[View on TE.com >](#)

Heat Shrink Tubing > ZHTM: Heat Shrink Tubing, 2:1 Shrink Ratio



Primary Product Color: **Black**

Wall Material Type: **Pre-Coated Wrap Jacket**

Expanded Inside Diameter (Min): **24 mm [ .945 in ]**

Recovered Inside Diameter (Max): **12 mm [ .472 in ]**

Shrink Ratio: **2:1**

[All ZHTM: Heat Shrink Tubing, 2:1 Shrink Ratio \(9\)](#)

## Features

### Product Type Features

Wall Material Type	Pre-Coated Wrap Jacket
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### Body Features

Fluid Type	Brake Fluid, Diesel Fuel, Hydraulic Fluid, Insulating Oil, Lubricating Oil, Unleaded Gasoline, Water
Material Systems Code	100
Primary Product Color	Black
Shrink Ratio	2:1
Primary Product Material	Chlorinated Polyolefin
Flexibility	Flexible

### Dimensions

Recovered Wall Thickness (Nominal)	1.1 mm[.043 in]
Expanded Inside Diameter (Min)	24 mm[.945 in]
Recovered Inside Diameter (Max)	12 mm[.472 in]
Tubing Size Range	12 – 24 mm[.472 – .945 in]

### Usage Conditions

Shrink Temperature (Min)	121 °C
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Tubing Flammability Type	Flame-Retardant
Operating Temperature Range	-30 – 105 °C
Recovery Temperature	121 °C

**Operation/Application**

Mechanical Resistance	Mechanical Damage
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**Packaging Features**

Packaging Method	Piece
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**Other**

Meets Low Outgassing Requirements	No
Product Source	US

**Product Compliance**

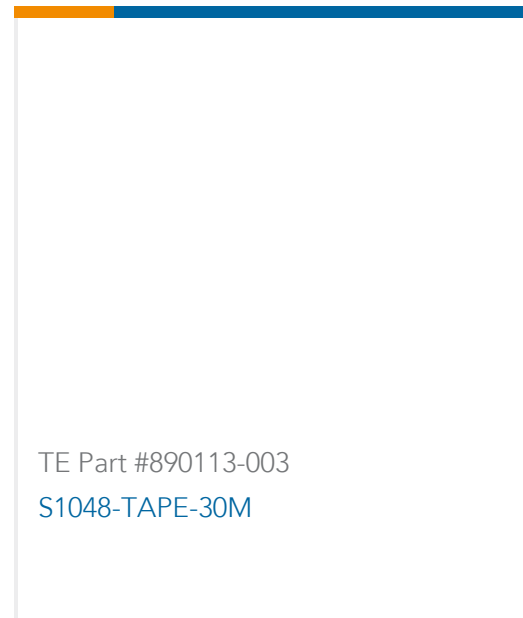
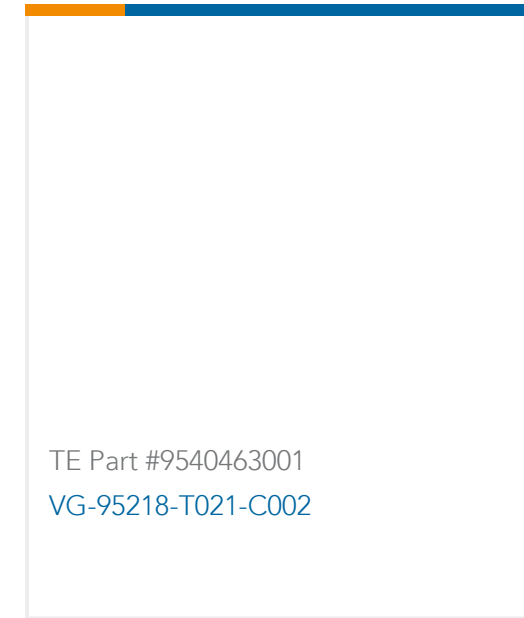
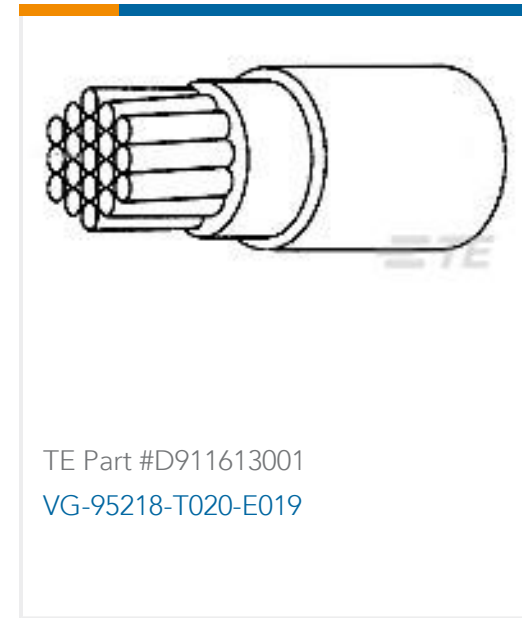
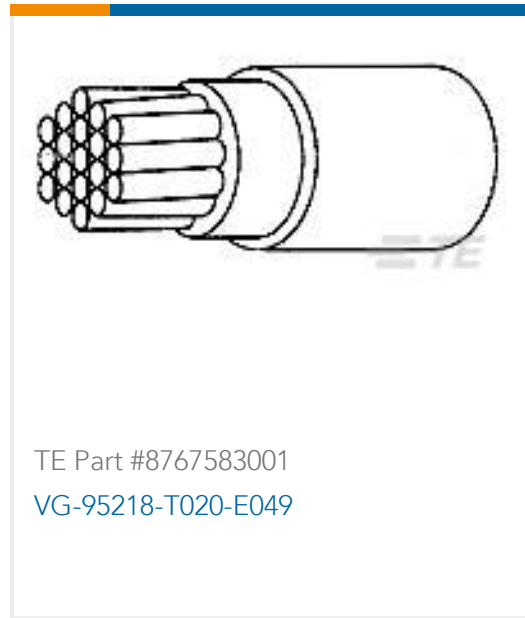
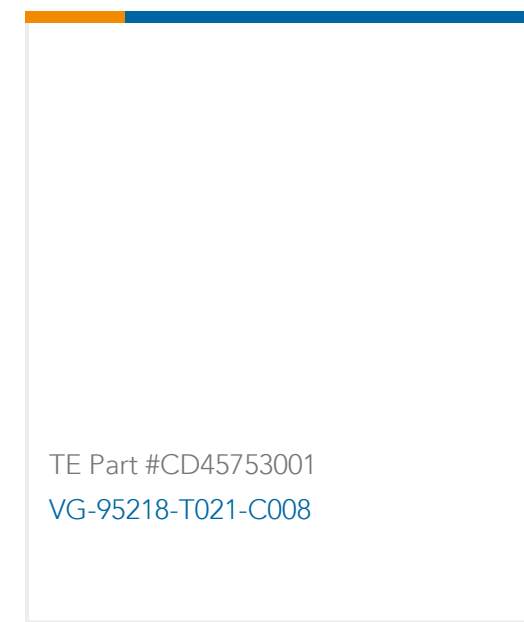
[For compliance documentation, visit the product page on TE.com>](#)

EU RoHS Directive 2011/65/EU	Compliant
EU ELV Directive 2000/53/EC	Compliant
China RoHS 2 Directive MIIT Order No 32, 2016	No Restricted Materials Above Threshold
EU REACH Regulation (EC) No. 1907/2006	Current ECHA Candidate List: JUNE 2023 (235) Candidate List Declared Against: JUNE 2023 (235) Does not contain REACH SVHC
Halogen Content	Low Halogen - Br, Cl, F, I < 900 ppm per homogenous material. Also BFR/CFR/PVC Free
Solder Process Capability	Not applicable for solder process capability

**Product Compliance Disclaimer**

This information is provided based on reasonable inquiry of our suppliers and represents our current actual knowledge based on the information they provided. This information is subject to change. The part numbers that TE has identified as EU RoHS compliant have a maximum concentration of 0.1% by weight in homogenous materials for lead, hexavalent chromium, mercury, PBB, PBDE, DBP, BBP, DEHP, DIBP, and 0.01% for cadmium, or qualify for an exemption to these limits as defined in the Annexes of Directive 2011/65/EU (RoHS2). Finished electrical and electronic equipment products will be CE marked as required by Directive 2011/65/EU. Components may not be CE marked. Additionally, the part numbers that TE has identified as EU ELV compliant have a maximum concentration of 0.1% by weight in homogenous materials for lead, hexavalent chromium, and mercury, and 0.01% for cadmium, or qualify for an exemption to these limits as defined in the Annexes of Directive 2000/53/EC (ELV). Regarding the REACH Regulation, the information TE provides on SVHC in articles for this part number is based on the latest European Chemicals Agency (ECHA) 'Guidance on requirements for substances in articles' posted at this URL: <https://echa.europa.eu/guidance-documents/guidance-on-reach>

**Customers Also Bought**



## Documents

### Product Drawings

[ZHTM-24/12-0-SP](#)

English

### Datasheets & Catalog Pages

[raychem-tubing-product-selection-guide](#)

English

[1654025\\_Sec3\\_ZHTM](#)

English

### Product Specifications

[Thermofit Zerohal ZHTM Tubing Elastomeric, Halgen-Free, Flame-Retarded, Flexible, Heat-Shrinkable](#)

English

[ZHTM SLEEVING](#)

English

### Product Environmental Compliance

[Safety Datasheet](#)

English



[Safety Datasheet](#)

English

[Safety Datasheet](#)

German

[Safety Datasheet](#)

[Safety Datasheet](#)

French

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[Instruction Sheets](#)

[Instruction Sheet \(U.S.\)](#)

English