



RAYCHEM | RAYCHEM DWFR

TE Internal #: EH2297-000

Black, 4:1, Dual Wall Tubing, Shrinks To .118 in [3 mm], Irradiated Modified Polyolefin, .472 in [12 mm] Inner Diameter, RAYCHEM DWFR

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Heat Shrink Tubing > DWFR Heat Shrink Tubing



Primary Product Color: **Black**

Wall Type: **Dual Wall**

Expanded Inside Diameter (Min): **12 mm [ .472 in ]**

Recovered Inside Diameter (Max): **3 mm [ .118 in ]**

Shrink Ratio: **4:1**

[All DWFR Heat Shrink Tubing \(16\)](#)

## Features

### Product Type Features

Wall Type	Dual Wall
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### Electrical Characteristics

Operating Voltage (Max)	.6 kV
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### Body Features

Primary Product Color	Black
Shrink Ratio	4:1
Primary Product Material	Irradiated Modified Polyolefin
Flexibility	Semi-Flexible

### Dimensions

Recovered Wall Thickness (Tolerance)	.25 mm[.01 in]
Recovered Wall Thickness (Nominal)	1.4 mm[.055 in]
Product Length	1220 mm[48 in]
Expanded Inside Diameter (Min)	12 mm[.472 in]
Recovered Inside Diameter (Max)	3 mm[.118 in]
Tubing Size Range	3 – 12 mm[.118 – .472 in]

### Usage Conditions



Shrink Temperature (Min)	60 °C
Resistance Properties	Moisture
Tubing Flammability Type	Highly Flame-Retardant
Operating Temperature Range	-40 – 110 °C
Recovery Temperature	110 °C

**Operation/Application**

Mechanical Resistance	Fluids, Mechanical Damage, Strain Relief
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**Product Availability**

Applicable Region	Global
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**Packaging Features**

Packaging Method	Bag & Box
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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) SVHC > Threshold: DBMC (1.39% in Component Part) <small>Article Safe Usage Statements: Wash thoroughly after handling. Do not handle until all safety precautions have been read and understood. Recycle if possible and dispose of the article by following all applicable governmental regulations relevant to your geographic location.</small>
Halogen Content	Not Low Halogen - contains Br or Cl > 900 ppm.
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>

## Compatible Parts



TE Part # 2280355-1  
220 V MODEL 17



TE Part # 1-2234800-1  
RBK-X1, AUTO TRIGGER



TE Part # 1-2234800-3  
RBK-X1, W/ AIR COOLING



TE Part # 1-2234800-4  
RBK-X1 CE, W/ AIR COOLING



TE Part # 1-2376800-3  
RBK-X1C, W/ AIR COOLING



TE Part # 1-2376800-4  
RBK-X1C CE, W/ AIR COOLING



TE Part # 2234800-1  
RBK-X1 STD



TE Part # 2234800-2  
RBK-X1 CE STD



TE Part # 2326489-1  
MODEL 105 TUNNEL OVEN, 36"  
ENTRY, STAND



TE Part # 2375310-1  
XB17 Belt Heater, 220V



TE Part # 2375310-2  
XB17 Belt Heater, 110V



TE Part # 2375320-1  
XB19 Belt Heater, STD



TE Part # 2375320-2  
XB19 Belt Heater, 150mm (6")  
Version



TE Part # 2376800-1  
RBK-X1C STD



TE Part # 2376800-2  
RBK-X1C CE STD



TE Part # 2394980-1  
MOD 105 TUN OVEN, 69"  
ENTRY, STARDARD



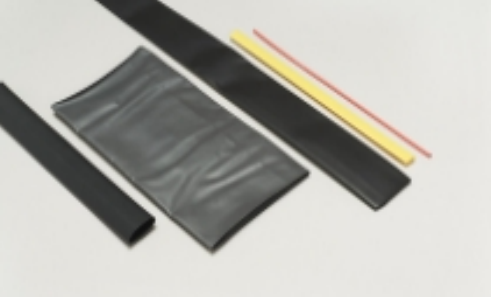

TE Part # 955018-000  
CLTEQ-M105-TUNNEL-OVEN



TE Part # 714529-000  
CLTEQ-M19-BELT-HTR

TE Part # 1-528018-1  
IR-1891 SHUTTLE RETURN

### Also in the Series | RAYCHEM DWFR



Heat Shrink Tubing(16)

### Customers Also Bought



TE Part #1393258-4  
V23047-A1012-A501



TE Part #EH2298-000  
DWFR Heat Shrink Tubing



TE Part #1423673-1  
W51-A121B1-5=CKTBKR,THERM,ROCK



TE Part #1-1423673-2  
W51-A122B1-10=CKTBKR,THERM,ROC



TE Part #6-1393252-1  
W67-X2Q12-30=M6/M7/M9/W6/W7



TE Part #2176337-1  
CRGCQ 0402 10R 1%

TE Part #1SNA150041R0000  
TH35-7.5-P6-1METER

### Documents

[Product Drawings](#)  
[DWFR-12/3-0-STK](#)

English

[Datasheets & Catalog Pages](#)  
[Measuring\\_Single\\_Wall\\_Tubing](#)

English



[Selecting\\_Correct\\_Tubing\\_1216](#)

English

[DWFR Heat Shrink Tubing product flyer](#)

English

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[Product Specifications](#)

[Application Specification](#)

English