Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

# Contact us

# ZHD-SCE
# LOW FIRE HAZARD
# DIESEL RESISTANT
## HEAT SHRINK IDENTIFICATION SYSTEM

### Technical Datasheet

TTDS-263 Revision 7  April 2017

**ZHD-SCE Zero Halogen,  Diesel Resistant, Heat Shrink Identification Marker Sleeves for the identification of wires and cables.**

ZHD-SCE is presented as cut sleeves organised in ladder format.

Manufactured using a specially developed radiation cross-linked, zero halogen material. ZHD-SCE is designed specifically to bridge the gap for installations where the highest performance is demanded from an identification sleeve, without compromising on safety or capability.

ZHD-SCE Heat Shrink Identification Marker Sleeves are available as part of a complete identification system.  The system comprises specific printers, thermal transfer ribbons and WINTOTAL software.

# ZHD-SCE, LOW FIRE HAZARD, DIESEL RESISTANT
## HEAT SHRINK CABLE IDENTIFICATION SYSTEM

### Features

- Zero Halogen

- Low Toxic Fumes

- Non-flame propagating

- Resistant to key rail and industrial fluids including diesel (defined by RW-2536)

- Sleeve diameters from 2.4mm to 38.1mm

- Shrink ratio 2:1

- Pre-termination Cable Identification

### Temperature Rating

- -55°C to 125°C (-67°F to 257°F)

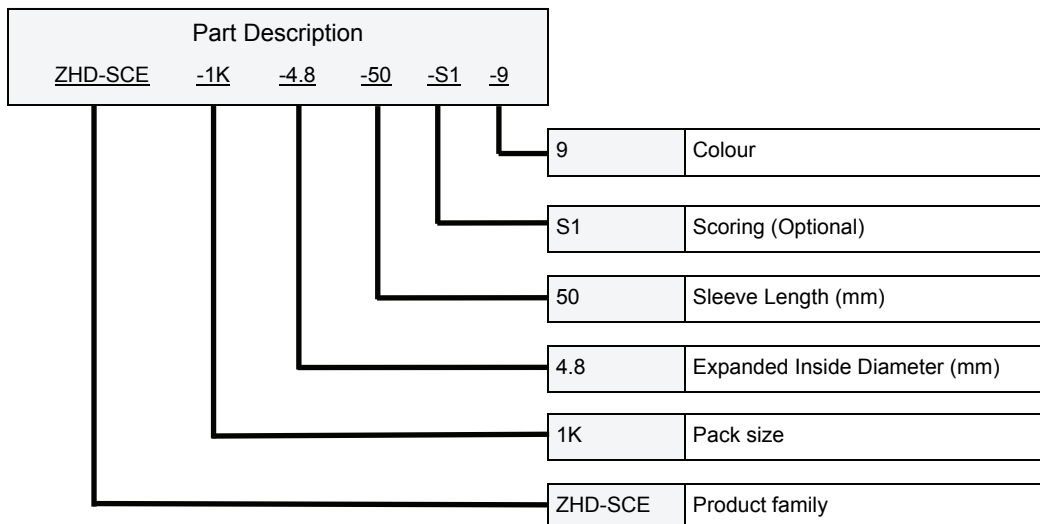### Applications



### Environmental Compliance

- No Halogens, Sulphur, Nitrogen, Phosphorus and Cadmium sources above trace level.  The flame retardant used in this product does not contain melamine cyanurate

- Further information and a downloadable declaration covering RoHS and REACH compliance can be found at the 'TE Product Compliance Support Centre':
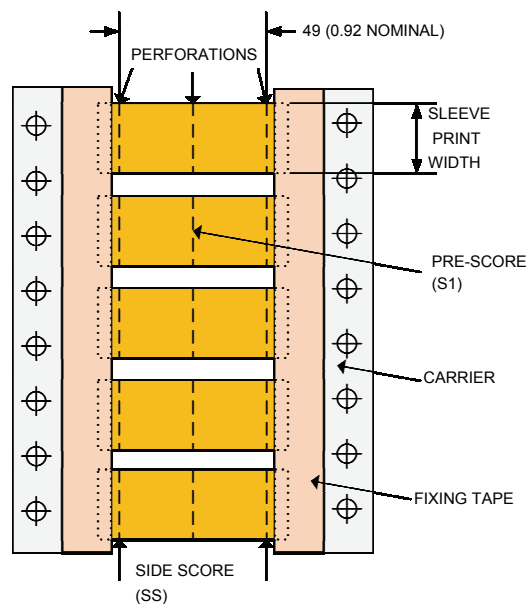
http://www.te.com/usa-en/utilities/product-compliance.html

### Shelf Life

- Refer to TE document 408-121006 Cable Identification Shelf Life

### Specifications / Approvals

| | |
|---|---|
| **TE Connectivity Standard** | **RW-2536** |
| **Rail Standards** | **EN45545-2**, Hazard Classifications 1 and 2, In accordance with requirement set R22/R23 |
| | **BS 6853** Code of practice for fire precautions in the design and construction of passenger carrying trains.<br>Interior minor use of materials of mass 100g to 500g vehicle category II |
| | **EN 50343** Rolling stock applications - Rolling stock - Rules for installation of cabling - Appendix H |
| | **NFPA 130** Standard for Fixed Guideway Transit and Passenger Rail Systems, Fire protection requirements, Interior Fire Propagation Resistance |
| | **Federal Railroad Administration**, DOT,  Appendix B to Part 238, Test Methods and Performance Criteria for the Flammability and Smoke Emission Characteristics of Materials used in Passenger Cars and Locomotive Cabs |
| | **SHAZAINENNSHI**, Japan Railway Rolling Stock & Machinery Association 2003 Classification 'Flame Retardant' Serial number 2015-166K |

**Where possible, TE has tested product as a finished item, including the print.  Operational tests are followed by an assessment of mark adherence to validate fit form and function.  Further details can be found in TE standard RW-2536.**

Part Description

ZHD-SCE   -1K   -4.8   -50   -S1   -9

| | |
|---|---|
| 9 | Colour |
| S1 | Scoring (Optional) |
| 50 | Sleeve Length (mm) |
| 4.8 | Expanded Inside Diameter (mm) |
| 1K | Pack size |
| ZHD-SCE | Product family |

## Options

| | | | |
|---|---|---|---|
| **Pre-scoring** | Perforated score to produce multiple marker sleeves from each ZHD-SCE sleeve. | | |
| | Not scored | Code | Blank |
| | Side scored | Code | SS |
| | Sided scored with one pre-score | Code | SS1 |
| | 1 Pre-score | Code | S1 |
| | 2 Pre-scores | Code | S2 |
| **Packaging sizes** | <blank> | 250 piece packs available for all sizes | |
| | 1K | 1000 piece reels available for all sizes up to 25.4 | |
| | 2.5K | 2500 piece reels available for sizes 4.8 up to 25.4 | |
| | 5K | 5000 piece reels available for sizes 2.4 and 3.2 | |
| **Colours** | | Yellow | White |
| | Code | 4 | 9 |
| | | Red | Green | Blue | Orange |
| | Code | 2 | 5 | 6 | 3 |

**Specify product name, pack size (leave blank for 250), sleeve size (in mm), sleeve length (always 50), pre-score (leave blank if not required) and colour**

49 (0.92 NOMINAL)

PERFORATIONS

SLEEVE PRINT WIDTH

PRE-SCORE (S1)

CARRIER

FIXING TAPE

SIDE SCORE (SS)

Dimensions in mm (inches)

## Ordering Information

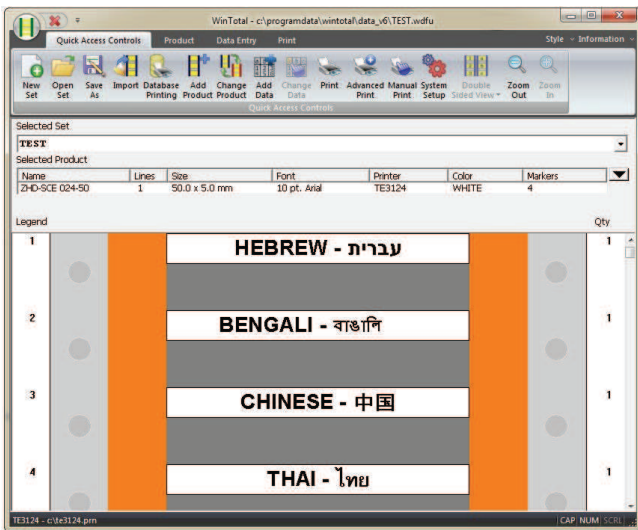| Ordering description | Inside diameter | | | | Recommended cable diameter use range | |
|---|---|---|---|---|---|---|
| | As supplied (minimum) | | After recovery (Maximum) | | | |
| | mm | inches | mm | inches | mm | inches |
| ZHD-SCE - <pack size> - 2.4 - 50 - <score> - <colour> | 2.4 | 0.094 | 1.19 | 0.047 | 1.27 to 1.90 | 0.050 to 0.075 |
| ZHD-SCE - <pack size> - 3.2 - 50 - <score> - <colour> | 3.2 | 0.126 | 1.58 | 0.060 | 1.77 to 2.66 | 0.069 to 0.105 |
| ZHD-SCE - <pack size> - 4.8 - 50 - <score> - <colour> | 4.8 | 0.189 | 2.36 | 0.090 | 2.54 to 4.06 | 0.100 to 0.160 |
| ZHD-SCE - <pack size> - 6.4 - 50 - <score> - <colour> | 6.4 | 0.250 | 3.18 | 0.125 | 3.81 to 5.46 | 0.150 to 0.215 |
| ZHD-SCE - <pack size> - 9.5 - 50 - <score> - <colour> | 9.5 | 0.375 | 4.75 | 0.187 | 5.59 to 8.12 | 0.220 to 0.320 |
| ZHD-SCE - <pack size> - 12.7 - 50 - <score> - <colour> | 12.7 | 0.500 | 6.35 | 0.250 | 6.99 to 10.79 | 0.275 to 0.425 |
| ZHD-SCE - <pack size> - 19.0 - 50 - <score> - <colour> | 19.0 | 0.730 | 9.53 | 0.375 | 10.16 to 16.25 | 0.400 to 0.640 |
| ZHD-SCE - <pack size> - 25.4 - 50 - <score> - <colour> | 25.4 | 1.000 | 12.70 | 0.500 | 14.29 to 21.59 | 0.563 to 0.850 |
| ZHD-SCE - 38.1 - 50 - <score> - <colour> | 38.1 | 1.500 | 19.05 | 0.750 | 20.95 to 33.02 | 0.825 to 1.300 |

TE
connectivity

## Printer Information

Print quality and print performance can only be guaranteed when specific TE printer and ribbons are used.

The current list of printers and ribbons can be found in TE document 411-121005 'Identification Printer Product Ribbon Matrix'. This document can be found in 'Access Our Tools':

http://www.te.com/usa-en/utilities/access-product-tools-and-resources.html

## Software

WINTOTAL software, available to download for a 14 day evaluation period from the Identification Printer Software page:

http://www.te.com/usa-en/products/identification-labeling/printers-software.html

Contact a TE representative for further information

**www.te.com/rail**

TTDS-263 ZHD-SCE HEAT SHRINK IDENTIFICATION MARKER SLEEVES