# WMS-2 HF 6,4 (EX10)R BU - Shrink sleeve

0819993

https://www.phoenixcontact.com/us/products/0819993

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Shrink sleeve, Roll, blue, unmarked, can be labeled with: THERMOMARK E.SLEEVE, THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLLMASTER 300/600, THERMOMARK ROLL X1, THERMOMARK ROLL, THERMOMARK ROLL 2.0, THERMOMARK W, THERMOMARK X1.2, cable diameter range: 3.2 ... 6.4 mm, unperforated, mounting type: slide-on, cable diameter range (automated processing): 3.2 ... 5 mm, Number of individual labels: 1, roll length: 25 m, text field height: 10 mm, text field width: 30000 mm

## Product description

The continuous shrink sleeves in the WMS-2 HF... product family, in size 3.2 ... 9.5, are suitable for automated processing with the THERMOMARK E.SLEEVE applicator. The continuous format of the material means that individual marker lengths can be realized. After the printing and applying process, you have the option of shrinking the marked shrink sleeves by applying heat manually and thus fixing them on the cable/wire.

## Your advantages

- Permanent and captive identification of single-core wires, wires, cables, pneumatic hoses, and other cylindrical objects
- High flexibility, as individual marker lengths ranging from 3.45 mm ... 2000 mm (0.14" ... 78.7") can be realized in combination with the cutter and perforation cutter
- As an option, the sleeves can be shrunk by applying heat manually to fix the sleeve in position
- High diameter coverage with a shrink ratio of 2:1
- Widely used and proven worldwide in the railway industry

## Commercial data

| | |
|---|---|
| Item number | 0819993 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BG14 |
| Product key | BG2216 |
| GTIN | 4055626056968 |
| Weight per piece (including packing) | 389.9 g |
| Weight per piece (excluding packing) | 389.9 g |
| Customs tariff number | 39173200 |
| Country of origin | PL |

## Technical data

### Notes

| | |
|---|---|
| Note on application | For the THERMOMARK ROLL and THERMOMARK ROLL 2.0 roll printers, this material can only be processed with an external media hub. |
| Material information | The specified minimum wire diameter of the shrink sleeve refers to its use as a marking material and does not guarantee any insulation characteristics once shrunk.<br><br>Depending on the processed material batch, as well as the storage and processing conditions, the maximum insertable wire diameter may be reduced. |

### Product properties

| | |
|---|---|
| Product type | Shrink sleeve |
| Area of application | Railway industry |

Marking

| | |
|---|---|
| Number of individual labels | 1 |
| Identification technology | Thermotransfer |

### Dimensions

| | |
|---|---|
| Length of roll | 25.00 m |
| Height | 11.3 mm |

### Material specifications

| | |
|---|---|
| Color | blue (RAL 5015) |
| Material | Polyolefine |
| Base element material | polyolefine |
| Shrink rate | 2:1 |
| Fire protection for rail vehicles (DIN EN 45545-2) R22 | HL 1 - HL 3 |
| Fire protection for rail vehicles (DIN EN 45545-2) R23 | HL 1 - HL 3 |
| Fire protection for rail vehicles (DIN EN 45545-2) R24 | HL 1 - HL 3 |
| Components | halogen-free |
| Shrink temperature | > 90 °C |

### Cable/line

| | |
|---|---|
| External cable diameter | 3.2 mm ... 6.4 mm |

### Environmental and real-life conditions

Test for substances that would hinder coating with paint or varnish

| | |
|---|---|
| Result | Test passed |

Test for substances that would hinder coating with paint or varnish

| | |
|---|---|
| Result | Test passed |
| Specification | DIN EN ISO 1518-1:2019-10 (following) |

| | |
|---|---|
| Requirements | ≥ 5 N |
| Result | Test passed |

Tesafilm test

| | |
|---|---|
| Specification | DIN EN ISO 2409:2013 (following) |
| Result | Test passed |

UV resistance

| | |
|---|---|
| Specification | ISO 4892-2:2013-03 (following) |
| Result | Test passed |
| Test duration | 96 h |
| Procedure | Artificial irradiation. |

Temperature resistance

| | |
|---|---|
| Specification | ANSI/UL 969-2018:03 (following) |
| Test duration | 240 h |
| Rating 125 °C (150 °C) | Test passed |

Wipe resistance of inscriptions

| | |
|---|---|
| Specification | DIN EN 61010-1 (VDE 0411-1):2011-07 |
| | DIN EN 62208 (VDE 0660-511):2012-06 (in parts) |
| Isopropyl<br>[CAS No. 67-63-0] | Test passed |
| n-Hexane<br>[CAS No. 110-54-3] | Test passed |
| Water + Petroleum ether<br>[CAS No. 64742-82-1] | Test passed |
| Sodium hydroxide 0.1 mol/l<br>[CAS No. 1310-73-2] | Test passed |
| Ethanol (99 %)<br>[CAS No. 64-17-5] | Test passed |
| Specification | ISO 175:2010 (following) |
| Test duration | 168 h |
| Sodium hydroxide 0.1 mol/l<br>[CAS No. 1310-73-2] | Test passed |
| Ethanol (99 %)<br>[CAS No. 64-17-5] | Test passed |
| Acetone (99 %)<br>[CAS No. 67-64-1] | Test passed |
| Diesel<br>[CAS No. 68476-34-6] | Test passed |
| IRM 901 | Test passed |
| IRM 902 | Test passed |

Testing in a condensation changing climate in the presence of sulfur dioxide

| | |
|---|---|
| Specification | DIN 50018:2013-05 |
| Result | Test passed |
| Climate level | AHT 1.0 S |
| Cycles | 2 |

Salt spray test

| | |
|---|---|
| Specification | DIN EN 60068-2-11:2000-02 |
| Result | Test passed |
| Test duration | 96 h |

Ambient conditions

| | |
|---|---|
| Ambient temperature (operation) | -30 °C ... 105 °C |
| Recommended ambient temperature (storage/transport) | 10 °C ... 25 °C |
| Recommended humidity (storage/transport) | 45 % ... 55 % (Storage in a dry and dark place in the original packaging is recommended) |
| Shelf life | 2 years |

## Standards and regulations

| | |
|---|---|
| Wipe resistance | DIN EN 61010-1 (VDE 0411-1) |

Standards

| | |
|---|---|
| Standards/regulations | EN 45545-2 |

## Mounting

| | |
|---|---|
| Mounting type | slide-on |

## Classifications

### ECLASS

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|---|---|
| ECLASS-13.0 | 27281102 |
| ECLASS-15.0 | 27281102 |

### ETIM

| | |
|---|---|
| ETIM 9.0 | EC001530 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39131500 |

## Environmental product compliance

EU RoHS

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|---|---|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |




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