



**Product:** [BE43800](#)

Railtuff ® 5E, 4PR #26 Str BC, PO ins, SF/UTP, LSNH Jkt, EN 45545-2

## Product Description

Railtuff ® 5E, 4 Pair AWG 26 Bare Copper - Stranded, Polyolefin (PO, PE, PP) insulation, SF/UTP - Overall Braid + Foil shielding, Crosslinked e-beam LSZH / FRNC jacket , EN 45545-2 HL1 - 3

## Technical Specifications

### Product Overview

Suitable Applications:	For use in railway applications such as rolling stock, buses or other vehicles, cable meets the requirements of the relevant part of international railway standards like DIN 5510-2, EN 50153, EN 50155, EN 50305 and EN 45545-2
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### Physical Characteristics (Overall)

#### Conductor

AWG	Stranding	Material	Construction n x D	No. of Pairs
26	Stranded	BC - Bare Copper	19x0.10 mm	4

Conductor Count:	8
Total Number of Pairs:	4

#### Insulation

Material	Nominal Diameter	Diameter +/- Tolerance
Polyolefin	1 mm	0.05 mm

Bonded-Pair:	No
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#### Color Chart

Number	Color
Pair 1	White/Blue & Blue
Pair 2	White/Orange & Orange
Pair 3	White/Green & Green
Pair 4	White/Brown & Brown

#### Outer Shield Material

Type	Material	Min. Coverage [%]
Tape	Alum / Poly	
Braid	Tinned Copper (TC)	85%

#### Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance	Min. Wall Thickness
LSZH / FRNC Thermoset (Cross-Linked)	6.7 mm	0.2 mm	0.9 mm

Table Notes:	e-Beamed to Cross-link
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### Electrical Characteristics

#### Conductor DCR

Max. Conductor DCR	Max DCR Unbalanced Between Pairs [%]	Max. DCR Unbalanced Within Pair [%]
14.5 Ohm/km	4 %	2 %

#### Capacitance

Max. Capacitance Unbalance	Max. Mutual Capacitance
1.6 pF/m	56 pF/m

#### Delay

Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
40 ns/100m	60%

#### High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	3.2 dB/100m	65.3 dB	62.3 dB	62.1 dB	59.1 dB	64 dB	61 dB	20 dB	40 dB	35 dB
4 MHz	6 dB/100m	56.3 dB	53.3 dB	50.3 dB	47.3 dB	52 dB	49 dB	23 dB	34 dB	23 dB
10 MHz	9.5 dB/100m	50.3 dB	47.3 dB	40.8 dB	37.8 dB	44 dB	41 dB	25 dB	30 dB	15 dB
16 MHz	12.1 dB/100m	47.2 dB	44.2 dB	35.2 dB	32.2 dB	39.9 dB	36.9 dB	25 dB	28 dB	10.9 dB
20 MHz	13.5 dB/100m	45.8 dB	42.8 dB	32.2 dB	29.2 dB	38 dB	35 dB	25 dB	27 dB	9 dB
31.25 MHz	17.1 dB/100m	42.9 dB	39.9 dB	25.8 dB	22.8 dB	34.1 dB	31.5 dB	23.6 dB	25.1 dB	5.5 dB
62.5 MHz	24.8 dB/100m	38.4 dB	35.4 dB	13.6 dB	10.6 dB	28.1 dB	25.1 dB	21.5 dB	22 dB	
100 MHz	33 dB/100m	35.3 dB	32.3 dB	3.3 dB	0.3 dB	24 dB	21 dB	20.1 dB	20 dB	

Table Notes:	According ISO/IEC 11801 Cat. 5e and ISO/IEC 61156-5
General Electrical Parameters Notes:	According ISO/IEC 11801 Cat. 5e and ISO/IEC 61156-5
Coupling Attenuation Class:	Type I
Segregation class according EN50174-2:	d

#### Transfer Impedance

Frequency [MHz]	Description	Transfer Impedance
1 Mhz	Grade 1	Max. 10 mOhm/m
10 Mhz		Max. 10 mOhm/m
30 Mhz		Max. 30 mOhm/m
100 Mhz		100 mOhm/m

#### Voltage

Voltage Rating [V]
300 V

#### Temperature Range

Installation Temp Range:	-5°C To +50°C
Storage Temp Range:	-40°C To +90°C
Operating Temp Range:	-40°C To +90°C

#### Mechanical Characteristics

Oil Resistance:	IEC 60811-2-1
Min Bend Radius (W/o Pulling Strength):	67 mm
Min Setting Radius:	33.5 mm

#### Standards

CENELEC Compliance:	EN45545-2, EN 50153, EN 50155 and EN 50305
Data Category:	Category 5e
Other Compliance:	EN 50306 par 4.8 + 4.9 + 4.10 (1.5 kV/1min); Toxicity index to NF X70-100 CITc Max. 0.7, EN 45545-2 (Class R14 HL 3)

#### Applicable Environmental and Other Programs

Environmental Space:	Indoor
EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-01

#### Flammability, LS0H, Toxicity Testing

IEC Flammability:	IEC 60332-1-2 and IEC 60332-3-25
Fire Resistance (Time to Failure) Compliance:	DIN 5510-2 protection level 1 to 4
Other Flammability:	EN45545-2:2013 HL1 to HL 3 ; EN 50305 9.1.1 ; UN ECE-R118.02
IEC 60754-1 (EN50267-1)- Halogen Amount:	Zero
IEC 60754-2 (EN50267-2)- Halogen Acid Gas Amount - Max. Conductivity:	2.5 µS/mm
IEC 60754-2 (EN50267-2)- Halogen Acid Gas Amount - Min. pH:	4.3

## Part Number

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### Variants

Item #	Color	Putup Type	Length	EAN
BE43800.00305	Black	Reel	305 m	8719605026552
BE43800.00500	Black	Reel	500 m	8719605026569
BE43800.001000	Black	Reel	1,000 m	8719605026545

### History

Update and Revision:	Revision Number: 0.219 Revision Date: 07-23-2020
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