



【EN45545-2】 TRAIN CAT.7 S/FTP

第七類乙太網路電纜 軌道級 x 低煙無鹵

Conductor

23AWG Solid Bare Copper

Insulation

HDPE(Polyethylene)

Color Code

Pair1: Blue & White/Blue

Pair2: Orange & White/Orange

Pair3: Green & White/Green

Pair4: Brown & White/Brown

Shielded Structure

Aluminum Foil Shielded each pair

Tinned Copper Drain Wire

Tinned Copper Braided 60%

Jacket Material

498K-1320 Series® LSZH

Compliant to EN 45545-2

Overall Diameter

OD: 8.00 mm $\pm$ 0.3mm

導體結構

使用 23AWG 單股軟銅線

絕緣層材質

高密度聚乙烯絕緣

芯線色碼

第一對: 藍 & 白注藍條

第二對: 橙 & 白注橙條

第三對: 綠 & 白注綠條

第四對: 棕 & 白注棕條

隔離結構

各對鋁箔隔離

鍍錫銅排流線(地線)

鍍錫銅網編織 60%

外被材質

498K-1320 Series® 低煙無鹵披覆

符合 EN 45545-2 標準

總完成外徑

OD: 8.0 mm $\pm$ 0.3mm



498K-1320 SERIES EN-45545-2 Railway Cable



Fire protection on railway vehicles, hazard level HL1 - HL3. EN 45545

Vertical flame spread	$50 < L \leq 540 \text{ mm}$	EN 60332- 1- 2
Vertical flame spread, bunched, $D \leq 6 \text{ mm}$	$L \leq 1.5 \text{ m}$	EN 50305, 9.1.2
Vertical flame spread, bunched, $6 < D < 12 \text{ mm}$	$L \leq 2.5 \text{ m}$	EN 50305, 9.1.1 (EN 60332- 3- 25)
Vertical flame spread, bunched, $D \geq 12 \text{ mm}$	$L \leq 2.5 \text{ m}$	EN 60332- 3- 24
Smoke density	$T \geq 70 \%$	EN 61034- 2
Toxicity	$ITC \leq 6$	EN 50305, 9.2

Fire protection on railway vehicles, level of protection . 1 - 4 DIN 5510

Vertical flame spread	$50 < L \leq 540 \text{ mm}$	EN 60332- 1- 2
Vertical flame spread, bunched, $D \leq 6 \text{ mm}$	$L \leq 1.5 \text{ m}$	EN 50305, 9.1.2
Vertical flame spread, bunched, $6 < D < 12 \text{ mm}$	$L \leq 2.5 \text{ m}$	EN 60332- 3- 25
Vertical flame spread, bunched, $D \geq 12 \text{ mm}$	$L \leq 2.5 \text{ m}$	EN 60332- 3- 24
Smoke density	$T \geq 60 \%$	EN 61034- 2
Corrosivity of combustion gases	$\text{pH} \geq 4.3$, $C \leq 10 \text{ mS/mm}$	EN 50267- 2- 2
Amount of halogen acid gas	$\text{HCl} + \text{HBr} \leq 0.5 \%$	EN 50267- 2- 1
Content of fluorine	$\text{HF} \leq 0.1 \%$	EN 60684- 2, 45.2
Toxicity	$ITC \leq 6$	EN 50305, 9.2

IEC 61034-2

TAYUKABEL®

TAYUKABEL® 498K-1320 系列產品 · 符合 EN-45545 軌道電纜規範

Bare Copper or Tinned Copper strand acc. to IEC 60228, EN 60228, VDE 0295, Class 5

【 Characteristic 電纜特性 】

Testing voltage 電纜線試驗電壓	U ₀ /U 450/750 V
Min. bending radius: 電纜線最小彎曲半徑	R ≥ 10D
Temperature range 電纜線額定耐溫	-40~125 °C (Optional)

【 Halogen-Free 不含鹵素 】

Amount of halogen acid gas 鹵酸氣體含量	HCl + HBr ≤ 0.5 %, acc. to EN 50267- 2- 1
Corrosivity of combustion gases 腐蝕性氣體	pH ≥ 4.3, C ≤ 10 mS/mm ,acc. to EN 50267- 2- 2
Content of fluorine 氟化物含量	HF ≤ 0.1 %, acc. to EN 60684- 2, 45.2

【 Flame retardant and self-extinguishing 耐燃性 自熄性 】

Vertical flame spread	50 < L ≤ 540 mm ,acc. to IEC60332- 1- 2 / EN 60332- 1- 2
Vertical flame spread, bunched, D ≥ 6 mm	L ≤ 1.5 M ,acc. to IEC 60332- 1- 2 / EN 60332- 1- 2
Vertical flame spread, bunched, 6 < D < 12 mm	L ≤ 2.5 M ,acc. to IEC 60332- 3- 25 / EN 50305, 9.1.2
Vertical flame spread, bunched, D ≤ 12 mm	L ≤ 2.5 M ,acc. to IEC 60332- 3- 24 / EN 50305, 9.1.1

【 Toxicity Index 毒性指數 】

Toxicity Index test	ITC ≤ 6 ,acc. to EN 50305, 9.2
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【 Smoke density 低煙性 濃煙密度 】

Smoke density test	Transmittance ≥ 60 % ,acc. to IEC 61034- 2
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SPECIFICATION規格書

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Technical information 技術資料

TAYUKABEL® 498K-1320 Railway LSZH Cable

Describes

LSHF stands for Low Smoke Halogen Free and describes a cable jacket material that is non-halogenated and flame retardant. This type of jacket material has excellent fire safety characteristics of low smoke, low toxicity and low corrosion. This type of cable jacket material is used in applications such as Central Offices, Mass Transit Rail Systems, Nuclear Plants and Oil Refineries or in any other application where the protection of people and equipment from toxic and corrosive gases is critical.

Application

These cables are used for protected installations inside and outside of rail vehicles and buses and other rail vehicles for the connection of fixed and moved parts. These cables have optimised outer diameter and therefore they are applied in applications where space is very limited. Cables are suitable for the wiring of electric engines, switch and auxiliary boards, converters and distribution boxes. These cables are qualified for short circuit and earth fault-proof applications. For installation the guidelines of EN 50355 and EN 50343 must be considered.

Construction

Conductor	Tinned fine copper strands according to VDE 0295 / IEC 60228 class 5
Insulation	Special High-density polyethylene
Sheath	Low Smoke Halogen Free Jacket
Colour	Acc to DIN 47100 as following table

Application advantage

- Suitable for rail vehicles and buses
- Fixed and install easily
- Installing simply

Flame Retardant with LSHF Standard

Single wire vertical flame ($50 < L < 540$ mm)	IEC 60332-1-2 ,EN 60332-1-2
Multiple cable vertical flame ($L \leq 2.5$ m)	IEC 60332-3-25 ,EN 60332-3-25
Absence of halogens ($HCl + HBr \leq 0.5$ %)	IEC 60754-1 ,EN 50267-2-1
Content of fluorine ($HF \leq 0.1$ %)	IEC 60684-2 ,EN 60684-2
Smoke density (transmittance > 60 %)	IEC 61034 ,EN 61034-2-2
Corrosivity of gases ($pH > 4.3$)	IEC 60754-2 ,EN 50267-2-2
Toxicity of smoke (ITC <6)	

Approval

AWM Style

 UL verify

Mechanical and thermal properties

Temperature range	Fixed installation: 75 °C / 90 °C / 105 °C / 125 °C
General requirements	This cable is qualify by RoHS (Restriction of the use of certain hazardous substances)

Table 1. Color code Acc to DIN 47100

Core Identification	1	2	3	4	5	6	7	8	9	10
Insulation. color	White	Brown	Green	Yellow	Grey	Pink	Blue	Red	Black	Violet