



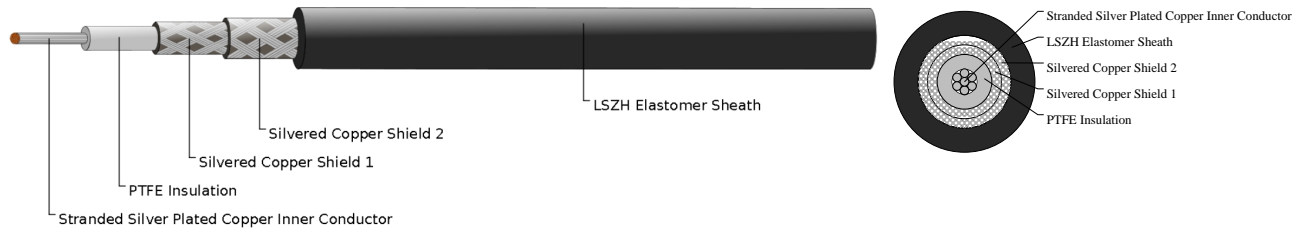
# Caledonian

Coaxial Cables For Railway Application

[www.caledonian-cables.com](http://www.caledonian-cables.com)

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## FRA 316 SW4



## APPLICATIONS

These cables are designed for flexible installations, inside and outside railway rolling stock.

## STANDARDS

DIN 5510-2

## CABLE CONSTRUCTION

Inner conductor: Stranded silver plated copper.

Insulation: PTFE.

Outer conductor (shield 1): Silver plated copper.

Outer conductor (shield 2): Silver plated copper.

Sheath: LSZH Elastomer.

## PHYSICAL AND THERMAL PROPERTIES

Minimum Bending Radius: 5mm (static)

Temperature Range: -40°C ~ +105°C

## Electrical Properties

Electrical Characteristics at 20°C:

Impedance: 50 +/- 2 Ω

Nominal Capacitance: 94.5 pF/m

Minimum Insulation Resistance: 100000 MΩ.km

Inner Conductor Resistance: 29.9 MΩ/km

Outer Conductor Resistance: 7.5 MΩ/km

Attenuation:

@10MHz: 7 dB/100m

@50MHz: 17 dB/100m

@100MHz: 24 dB/100m

@150MHz: 30 dB/100m

@200MHz: 35 dB/100m

@300MHz: 44 dB/100m

@400MHz: 52 dB/100m

@450MHz: 56 dB/100m

@500MHz: 59 dB/100m



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@600MHz:66 dB/100m

@800MHz:78 dB/100m

@850MHz:81 dB/100m

@900MHz:83 dB/100m

@950MHz:86 dB/100m

@1000MHz:89 dB/100m

@1800MHz:127 dB/100m

@1900MHz:131 dB/100m

@2000MHz:135 dB/100m

@2400MHz:152 dB/100m

@3000MHz:175 dB/100m

@4000MHz:211 dB/100m

@5000MHz:245 dB/100m

@6000MHz:277 dB/100m

Velocity of propagation:70.7%

## DIMENSION AND PARAMETERS

No./Nominal Diameter of Strands	Conductor Diameter	Nominal Outer Conductor Diameter	Nom. Overall Diameter	Approx. Weight
no./mm	mm	mm	mm	kg/km
7/0.18	0.54	2.5	3.16	21



Acid & Alkaline Resistant



Fire Retardant  
NF C32-070/2-20(1)  
IEC60332-3-24/EN50266-2-4



Flame Retardant  
NF C32-070/2-10(2)  
IEC60332-1-2/EN50265-2-1



Highly Flexible



Impact Resistant



Low Corrosivity  
IEC60754-2/EN50267-2-2/3  
NF C32-074/NF C20-453



Low Smoke Emission  
IEC 61034-2 / EN 50268-2  
NF C32-073/NF C 20-902



Low Toxicity



Oil Resistant



Zero Halogen  
IEC 60754-1/EN 50267-2-1  
NF C20-454