

## Coaxial Cable SPUMA\_500-FR-01

### Description

PE Foam - 50 Ohm - double screened



### Technical Data

#### Construction

|                  | Material                     | Detail                  | Diameter         |
|------------------|------------------------------|-------------------------|------------------|
| Centre conductor | Aluminium / Copper           | Wire                    | 3.58 mm          |
| Dielectric       | SPE (Foamed Polyethylene)    |                         | 9.43 mm          |
| Outer conductor  | Aluminum / PES               | longitudinal Foil, 100% | 9.55 mm          |
| Outer conductor  | Copper, Tin plated           | Braid, 90 %             | 10.36 mm         |
| Jacket           | LSFH (modified polyethylene) | RAL 9005 - bk           | 12.78 mm +/- 0.1 |

Print: HUBER+SUHNER SPUMA 500-FR-01 50 Ohm (PA no.)

#### Electrical Data

|                                |  |
|--------------------------------|--|
| Impedance                      | 50 Ω +/- 2                             |
| Operating Frequency            | 6 GHz                                  |
| Capacitance                    | 77.4 pF/m                              |
| Velocity of signal propagation | 86 %                                   |
| Signal delay                   | 3.87 ns/m                              |
| Insulation resistance          | ≥ 1 x 10 <sup>6</sup> MΩm              |
| Min. screening effectiveness   | ≥ 90 dB (up to 6 GHz)                  |
| Max. operating voltage         | ≤ 1.2 kV <sub>rms</sub> (at sea level) |
| Test voltage                   | 2 kV <sub>rms</sub> (50 Hz/1 min)      |

#### Mechanical Data

|                     |  |
|---------------------|--|
| Weight              | 17.8 kg/100 m                          |
| Min. bending radius | static<br>repeated (for ≤ 50 bendings) |
|                     | 34 mm<br>130 mm                        |

#### Environmental Data

|                          |                               |
|--------------------------|-------------------------------|
| Temperature range        | -40 °C... +85 °C              |
| Installation temperature | -20 °C... +60 °C              |
| Flammability             | EN 60332-1-2, IEC 60332-3-24, |
| Smoke density            | EN 61034-2                    |
| Halogen test             | IEC 60754                     |
| Uv resistance test       | ISO 4892-2A                   |
| 2011/95/EC (RoHS)        | compliant                     |

### Additional Information

EN 45545 compliant hazard level for indoor cables: HL3

DIN 5510-2 and NF F 16-101 compliant

#### Ordering Information

Order as SPUMA\_500-FR-01

#### Remarks

(For details refer to the HUBER+SUHNER RF CABLES GENERAL CATALOGUE or contact your nearest HUBER+SUHNER partner)

#### Suitable Connectors

Cable group X31 9 mm / 50 Ohm

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**Matrix** typical Attenuation [ formula:  $(a \cdot f^{0.5} + b \cdot f)$  ] and maximum Power CW [ formula:  $(p/f^{0.5})$  ]

Coefficients:

a = 0.1051

b = 0.0059

f<sub>max</sub> = 6

P at 1GHz = 750

| Frequency<br>(GHz) | Nom. attenuation<br>(dB / m)<br>sea level 25° C<br>ambient<br>temperature | Nom. attenuation<br>(dB / ft)<br>sea level 25° C<br>ambient<br>temperature | Max. CW power<br>(watt)<br>sea level 40° C<br>ambient<br>temperature |
|--------------------|---|--|--|
| 0,3                | 0,06  | 0,018  | 1369   |
| 0,6                | 0,08  | 0,026  | 968  |
| 0,9                | 0,11  | 0,032  | 791  |
| 1,2                | 0,12  | 0,037  | 685  |
| 1,5                | 0,14  | 0,042  | 612  |
| 1,8                | 0,15  | 0,046  | 559  |
| 2,1                | 0,16  | 0,050  | 518  |
| 2,4                | 0,18  | 0,054  | 484  |
| 2,7                | 0,19  | 0,057  | 456  |
| 3,0                | 0,2   | 0,061  | 433  |
| 3,3                | 0,21  | 0,064  | 413  |
| 3,6                | 0,22  | 0,067  | 395  |
| 3,9                | 0,23  | 0,070  | 380  |
| 4,2                | 0,24  | 0,073  | 366  |
| 4,5                | 0,25  | 0,076  | 354  |
| 4,8                | 0,26  | 0,079  | 342  |
| 5,1                | 0,27  | 0,082  | 332  |
| 5,4                | 0,28  | 0,084  | 323  |
| 5,7                | 0,28  | 0,087  | 314  |
| 6,0                | 0,29  | 0,089  | 306  |