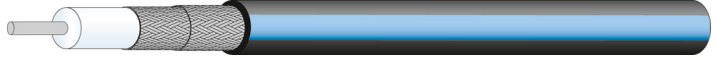


## Coaxial Cable ENVIROFLEX\_142

### Description

PE Foam cross-linked - 50 Ohm - double screen (UL AWM Style 3651)



### Technical Data

#### Construction

|                  | Material                 | Detail        | Diameter     |
|------------------|--------------------------|---------------|--------------|
| Centre conductor | Copper, Silver plated    | Wire          | 0.95 mm      |
| Dielectric       | SPEX (Crosslink Foam PE) |               | 2.95 mm      |
| Outer conductor  | Copper, Silver plated    | Braid, 97%    | 3.58 mm      |
| Outer conductor  | Copper, Silver plated    | Braid, 95 %   | 4.16 mm      |
| Jacket           | RADOX                    | black/bl line | 5 mm +/- 0.1 |

Print: HUBER+SUHNER ENVIROFLEX 142 50 Ohm (UL logo) AWM Style 3651 (PA no.)

#### Electrical Data

|                                |                                             |
|--------------------------------|---------------------------------------------|
| Impedance                      | 50 $\Omega$ +/- 2                           |
| Operating Frequency            | 6 GHz                                       |
| Capacitance                    | 94.5 pF/m                                   |
| Velocity of signal propagation | 70.9 %                                      |
| Signal delay                   | 4.7 ns/m                                    |
| Insulation resistance          | $\geq 1 \times 10^7$ MQm                    |
| Min. screening effectiveness   | $\geq 75$ dB (up to 5 GHz)                  |
| Max. operating voltage         | $\leq 2.5$ kV <sub>rms</sub> (at sea level) |
| Test voltage                   | 5 kV <sub>rms</sub> (50 Hz/1 min)           |
| Voltage Rating UL              | 300 V                                       |
| Phase vs Temperature           | -40°C... + 100°C                            |
|                                | 9000 ppm                                    |

#### Mechanical Data

|                     |                                            |
|---------------------|--------------------------------------------|
| Weight              | 6 kg/100 m                                 |
| Min. bending radius | static<br>30 mm                            |
|                     | repeated (for $\leq 50$ bendings)<br>50 mm |

#### Environmental Data

|                          |                                                            |
|--------------------------|------------------------------------------------------------|
| Temperature range        | -40 °C... +105 °C                                          |
| Temperature Rating UL    | 105 °C                                                     |
| Installation temperature | -20 °C... +60 °C                                           |
| Flammability             | EN 60332-1-2, UL 1581 § 1100, IEC 60332-2, EN 50305, 9.1.2 |
| Smoke density            | EN 61034-2                                                 |
| Halogen test             | IEC 60754                                                  |
| Uv resistance test       | IEC 60068-2-5, proc. C                                     |
| Abraison test            | MIL-T-81490 - §4.7.19 - prod. II - modified                |
| Thermal stress test      | IEC 61196-1 § 10.9                                         |
| 2011/65/EU (RoHS)        | compliant                                                  |

### Additional Information

Railway certificates discontinued by end of 2017. Replacement type for railway: RADOX\_RF\_142.

#### Ordering Information

Order as ENVIROFLEX\_142

#### Remarks

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

#### Suitable Connectors

Cable group U9 3 mm / 50 Ohm

## Coaxial Cable ENVIROFLEX\_142

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

Coefficients:

a = 0.365

b = 0.142

f<sub>max</sub> = 6

P at 1GHz = 225

| 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                | 0,24                                                                      | 0,074                                                                      | 411                                                                  |
| 0,6                | 0,37                                                                      | 0,112                                                                      | 290                                                                  |
| 0,9                | 0,47                                                                      | 0,144                                                                      | 237                                                                  |
| 1,2                | 0,57                                                                      | 0,174                                                                      | 205                                                                  |
| 1,5                | 0,66                                                                      | 0,201                                                                      | 184                                                                  |
| 1,8                | 0,75                                                                      | 0,227                                                                      | 168                                                                  |
| 2,1                | 0,83                                                                      | 0,252                                                                      | 155                                                                  |
| 2,4                | 0,91                                                                      | 0,276                                                                      | 145                                                                  |
| 2,7                | 0,98                                                                      | 0,300                                                                      | 137                                                                  |
| 3,0                | 1,06                                                                      | 0,323                                                                      | 130                                                                  |
| 3,3                | 1,13                                                                      | 0,345                                                                      | 124                                                                  |
| 3,6                | 1,2                                                                       | 0,367                                                                      | 119                                                                  |
| 3,9                | 1,27                                                                      | 0,388                                                                      | 114                                                                  |
| 4,2                | 1,34                                                                      | 0,410                                                                      | 110                                                                  |
| 4,5                | 1,41                                                                      | 0,431                                                                      | 106                                                                  |
| 4,8                | 1,48                                                                      | 0,451                                                                      | 103                                                                  |
| 5,1                | 1,55                                                                      | 0,472                                                                      | 100                                                                  |
| 5,4                | 1,61                                                                      | 0,492                                                                      | 97                                                                   |
| 5,7                | 1,68                                                                      | 0,512                                                                      | 94                                                                   |
| 6,0                | 1,75                                                                      | 0,532                                                                      | 92                                                                   |