

|              |  |
|--------------|--|
| Product name | Microduct ID 7×5/3.5mm WHITE HFFR with HFFR jacket D500m |
| Product code | 2821912  |
| GTIN         | 7070701365633  |
| ETIM-Class   | EC001474   |



## PRODUCT SPECIFICATIONS

HFFR microducts are designed for long term protection of fiber optical cables and are especially suitable for installation of micro cables. Indoor microducts are used for indoor installation applications with a sheath made of halogen-free, flame retardant material. Parameters such as flexibility and higher safety levels for fire and dangerous substances makes it optimized for safe and effective indoor installations.

Compliant to Telcordia GR 3155-CORE

## Measurements

|        |          |
|--------|----------|
| Length | 1 000 mm |
| Height | 16 mm    |
| Width  | 17 mm    |
| Weight | 188 g    |

## Technical Specifications - Single Ducts

|                          |            |
|--------------------------|------------|
| Duct Type                | 5/3.5      |
| Duct Colour              | White      |
| Outer Diameter           | 5 mm       |
| Outer Diameter Tolerance | +/- 0.1 mm |
| Inner Diameter           | 3,5 mm     |
| Inner Diameter Tolerance | +/- 0.1 mm |
| Min Bending Radius       | 50 mm      |

|  |                     |
|--|---------------------|
| Max Install Tensile Force                  | 100 N               |
| Inner clearance test (of ID)               | 85 %                |
| Weight                                     | 18 kg/km            |
| Outer/inner surface quality (PN 64-004-99) | Without Deformation |
| Longitudinal reversion (EN ISO 2505)       | max 3%              |
| Density (EN ISO 1183)                      | 1.55 +/- 0.1        |
| Blowing pressure                           | 16 Bar              |

## Technical Specifications - Bundle

|                                    |                  |
|------------------------------------|------------------|
| Bundle Type                        | 7-way            |
| Tube Colour Sequence               | Number Sequenced |
| Sheath Colour (Bundle)             | White            |
| Sheath Thickness                   | 0,8 mm           |
| Bundle Dimensions                  | 16.6 x 15.6 mm   |
| Min Bending Radius (Bundle)        | 166 mm           |
| Max Install Tensile Force (Bundle) | 700 N            |
| weight                             | 188 kg/km        |

## Mechanical Characteristics

|   |   |
|---|---|
| Temperature ranges for installation             | +5°C - +45°C  |
| Temperature ranges for Operation                | -40°C - +70°C                                       |
| Temperature ranges for transport and storage    | -20°C - +55°C                                       |
| Pressure Withstand (EN 1167-1,2)                | resistance to internal pressure (23°C, 16 bar, 2 h) |
| Tensile performance (IEC 60794-1-21, Method E1) | compliant   |
| Kinking (IEC 60794-1-21, Method E10)            | compliant   |
| Crush (IEC 60794-1-21, Method E3A)              | compliant   |
| Impact (IEC 60794-1-21, Method E4)              | compliant   |
| Bending (IEC 60794-1-21, Method E11B)           | compliant   |
| Repeated bending (IEC 60794-1-21, Method E6)    | Bending diam 40x OD, 25 cycles without any damage   |
| Coefficient of Friction (IEC 62470)             | < 0,1   |
| Torsion IEC-60794-1-21-E7                       | Tension around a curve of 1040mm with CoF <0.1      |
| ESCR Test (ASTM D1693)                          | Condition B>500h with min 5 OK out of 10            |

## Flame Retardant Test Compliance

|                                |   |
|--------------------------------|---|
| Fire Classification EN 13501-1 | B-s1, d0                                |
| Flammability Compliance        | EN 60332-3-10, EN 60332-3-23 category B |
| Smoke Density                  | IEC 61034-2                             |

|                                    |                                 |
|------------------------------------|---------------------------------|
| Halogen Content                    | IEC 60754-1, 0%                 |
| UL 94 (EN 60695-11-10)             | V-0                             |
| Limiting oxygen index (ISO 4589-2) | Min. 32%                        |
| Droplets                           | No material dripping at burning |