

<b>Product name</b>	Microduct ID 4x5/3.5mm WHITE HFFR with HFFR jacket D500m
<b>Product code</b>	5045332
<b>GTIN</b>	7332811363207
<b>ETIM-Class</b>	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

<b>Length</b>	1 000 mm
<b>Height</b>	12 mm
<b>Width</b>	12 mm
<b>Weight</b>	121 g

## Technical Specifications - Single Ducts

<b>Duct Type</b>	5/3.5
<b>Duct Colour</b>	White
<b>Outer Diameter</b>	5 mm
<b>Outer Diameter Tolerance</b>	+/- 0.1 mm
<b>Inner Diameter</b>	3,5 mm
<b>Inner Diameter Tolerance</b>	+/- 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	4-way
Tube Colour Sequence	Number Sequenced
Sheath Colour (Bundle)	White
Sheath Thickness	0,8 mm
Bundle Dimensions	11.6 x 11.6 mm
Min Bending Radius (Bundle)	116 mm
Max Install Tensile Force (Bundle)	400 N
weight	121 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

duct_lszh_eu_fire_performance	B-s1, d0
Flammability Compliance	en 60332-3-10, en 60332-3-23 category b

<b>Smoke Density</b>	iec 61034-2
<b>Halogen Content</b>	iec 60754-1, 0%
<b>UL 94 (EN 60695-11-10)</b>	v-0
<b>Limiting oxygen index (ISO 4589-2)</b>	min. 32%
<b>Droplets</b>	No material dripping at burning