Product name	Microduct ID 12×5/3.5mm WHITE HFFR with HFFR jacket D500m
Product code	5045334
GTIN	7332811363221
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	20 mm
Width	22 mm
Weight	296 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
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	12-way
Tube Colour Sequence	Number Sequenced
Sheath Colour (Bundle)	White
Sheath Thickness	0.8 mm
Bundle Dimensions	21.6 × 19.6 mm
Min Bending Radious (Bundle)	216 mm
Max Install Tensile Force (Bundle)	1,200 N

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

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