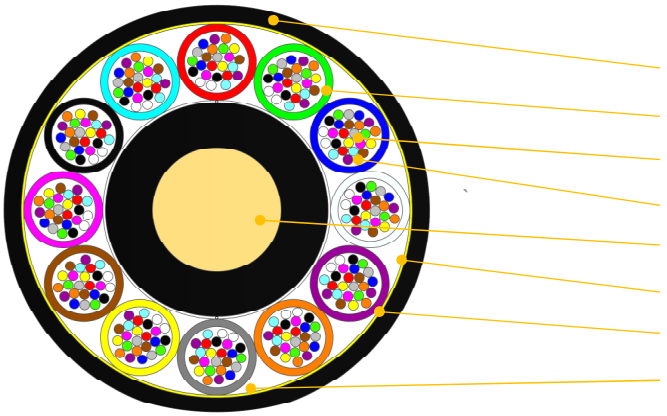
# Multi loose tube blowing microcable MK-UX8




*schematic drawing, not to scale

## DESIGN:

FRP strength and anti-buckling element
Water swellable yarns to prevent moisture ingress into the cable
SZ stranded cable core
Loose tubes (PBT Ø 1,2 mm) with thixotropic filing compound and 200 µm optical fibres
Suitable filler type when applicable
Water-swellable aramid binder
Polyester ripcord
UV stabilized black HDPE sheath

| Variant | Quantity [pcs] | | | | Ø nominal (±3 %) | Nominal weight (±5 %) | Max allowed tension | Max static tension |
|---|---|---|---|---|---|---|---|---|
| | Fibres | Fibres per tube | Total elements | Active tubes | [mm] | [kg/km] | [N] | [N] |
| 1-12T x 12F | 12-144 | 12 | 12 | 1-12 | 6,8 | 42 | 850 | 150 |
| 16-24T x 12F (two layers) | 192-288 | 12 | 24 | 16-24 | 7,9 | 61 | 1800 | 400 |

## APPLICATION:

| | | | | | |
|---|---|---|---|---|---|
| **Temperature range** | Transport & Storage: | - 40 to + 70 ℃ | | **Minimum Bending Radius** | |
| | Installation: | - 15 to + 60 ℃ | | Dynamic | 20 x cable Ø |
| | Operation: | - 20 to + 70 ℃ | | Static: | 15 x cable Ø |

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

| Test | Specification | Method | Requirements |
|---|---|---|---|
| Tensile strength | IEC60794-1-21 Method E1 | **Sustained load**: as provided in table above | $\Delta\varepsilon_f \leq 0.1\%$( during test)<br>$\Delta\alpha \leq 0.05$ dB/km @ 1550 nm (during test)<br>No significant damage to fibre unit |
| | | **Extended load**: as provided in table above | $\Delta\varepsilon_f \leq 0.6\%$(during test)<br>$\Delta\alpha \leq 0.05$ dB/km @ 1550 nm (after test)<br>No significant damage to fibre unit |
| Crush resistance | IEC60794-1-21 Method E3 | **Load:** 900 N / 10 cm / 5min | $\Delta\alpha \leq 0.1$dB @ 1550 nm (after test)<br>No jacket cracking and fibre breakage |
| Impact resistance | IEC60794-1-21 Method E4 | **Impact energy**: 2 J | $\Delta\alpha \leq 0.1$ dB @ 1550 nm (after test)<br>No jacket cracking and fibre breakage |
| Torsion | IEC60794-1-21 Method E7 | **Cable length to be twisted:** 2 m<br>**No. of cycles:** 10<br>**Twist angle:** ±180° | $\Delta\alpha \leq 0.1$ dB @ 1550 nm (after test)<br>No jacket cracking and fibre breakage |
| Bending | IEC60794-1-21 Method E11 | **Mandrel radius**: 15 x OD / 4 turns / 3 cycles | $\Delta\alpha \leq 0.1$ dB @ 1550 nm (after test)<br>No jacket cracking and fibre breakage |
| Repeated bending | IEC60794-1-21 Method E6 | **Sheave Radius:** 20 x OD | $\Delta\alpha \leq 0.1$ dB @ 1550 nm (after test)<br>No jacket cracking and fibre breakage |

| | | | |
|---|---|---|---|
| Water penetration | IEC 60794-1-22 Method F5B | **Water head**: 1 m<br>**Sample length**: 3 m<br>**Time**: 24 hrs | No water leakage |
| Temperature Cycling | IEC 60794-1-22 Method F1 | **1st cycle:**<br>+23 ℃ → -20 ℃(Ta1) → +60 ℃(Tb1) → -40 ℃(Ta2) → +70 ℃(Tb2)<br>**2nd cycle:**<br>-20 ℃(Ta1) → -40 ℃(Ta2) → +60 ℃(Tb1) → +70 ℃(Tb2) → +23 ℃<br>**Time at temperature: 8h** | Δα≤0.1 dB/km for Ta1 and Tb1 @ 1550 nm<br>Δα reversible for Ta2 and Tb2 @ 1550 nm |

## OPTICAL FIBRE AND LOOSE TUBES COLOUR IDENTIFICATION

For optical fibres and loose tube identification information please see **DSH_Colors_CODE_XXXX** document.

## FIBRE PARAMETERS

For selected post-production optical fibres parameters please see **DSH_OFP** document.

## MARKING

The following print (laser or other suitable method) is applied at 1-meter intervals:

- Supplier: FIBRAIN
- Standard code (Product type, fibre type, fibre count)
- Year of manufacture: xxxx
- Length marking in meters
- Cable ID / Drum No

Example: FIBRAIN MK-UX8 144F SM G657A1 200um 12T12F "YEAR OF MANUFACTURE" "LASER SYMBOL" "LENGTH MARKING" "BATCH NUMBER"

The accuracy of marking is ±0,5%. Remarking is in accordance with Bellcore GR 20 and supersedes earlier markings. Occasional loss of marking is possible. Cables can be supplied with a range of single mode or multimode fibres and customized print.

## PACKING

Cables will be shipped on disposable wooden or treated wooden drums. Both ends of the cable will be capped and accessible for testing. Identification information label will be placed on the drum.

## DELIVERY LENGTH

2000 – 4000 meters ± 5%, with possibility of supplying up to 5% of total contract quantity as short length cables which should be above 1000 meters long. Tolerance of 5 % of order quantity shall be allowed.