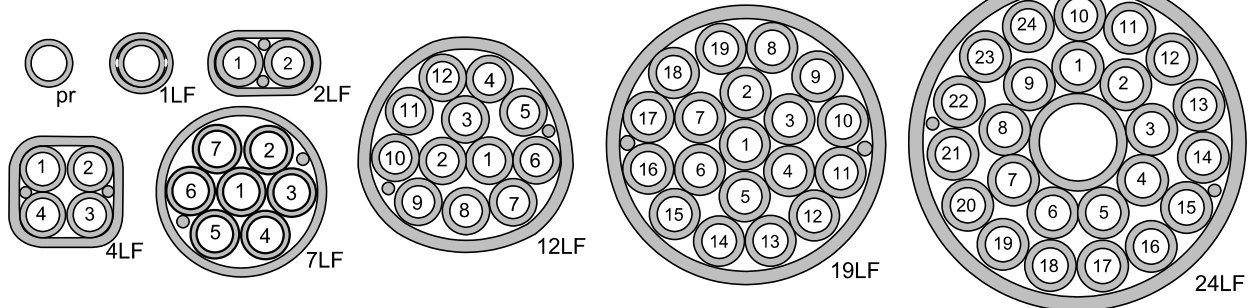


**FibreFlow™**
**Low Fire Hazard bundles**

EN61386-22 – 1, 2, 2, 0 for Construction Products Regulation


**GENERIC PRODUCT DESCRIPTION:**

Assemblies of LFH microducts (m/d) as specification MHT 381 (5/3.5), each with low friction performance for fibre blowing. Each assembly is surrounded with a sheath of LFH material, giving excellent performance in a fire scenario: They are a) Low flammability b) Low smoke c) Low acid/fume

d) Halogen-free. These lightweight, metal-free, flexible products are intended for indoor installation, and may be pulled into suitable indoor ducts using low tensions (listed). They are not for direct burial or aerial use.

**APPROPRIATE FIBRE TYPES:**

Any suitable sized Emtelle fibre unit: The 5/3.5mm microduct bundles will accommodate all FU counts: 2FU, 4FU, 8FU and 12FU.

**GENERIC DETAILS: MICRODUCTS (20°C):**

Primary m/d outer diameter, nominal	mm	<b>5.0</b>
Primary m/d inner diameter, nominal	mm	<b>3.5</b>
Diameter of centre m/d in 24-way, nom	mm	<b>10</b>
Min bend radius of primary m/d**	mm	<b>50</b>
Mass of primary m/d	g/m	<b>15</b>
Max pull force of primary m/d	N	<b>60</b>

NB: \*\* This radius relates to the microduct capability only, and does not indicate a suitable radius for blowing FU.

1. Microduct sizes are compatible with designated connectors
2. Max air pressure for blowing, all microducts: 10bar.
3. Max blowing temperature 40°C
4. Operating temperature (not blowing): -20°C to +60°C
5. Storage temperature: -25°C to +65°C
6. Storage of bundles and unprotected m/ds: Indoors and well shielded from daylight

**LFH MICRODUCTS AND SHEATH:**

1. Extruded from 100% virgin compound with these characteristics:
2. Tensile strength 11.5MPa, 102% retention after 7d at 110°C IEC60811-501
3. Elongation at break 155%, 94% retention after 7 days at 110°C
4. Cold elongation at -25°C minimum 43%
5. No halogen content (chlorine, bromine, fluorine)
6. Oxygen Index (LOI) 40%

**PRODUCT-SPECIFIC DETAILS:**

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type	OD nom mm	5/3.5 m/ds		
		Mass nom g/m	Min Bend Rad mm	Max* Pull force N
<b>1LF</b>	7.2	45	100	150
<b>2LF</b>	7.2/12.2	80	150	250
<b>4LF</b>	12.2/14.3	127	150	400
<b>7LF</b>	17.2	190	220	600
<b>12LF</b>	22.9	310	300	950
<b>19LF</b>	26.9	438	350	1300
<b>24LF</b>	32.5	591	500	1800

\* After applying pulling tensions, allow time for the pulled product to relax. See Installation manual.

## MICRODUCT AND ASSEMBLY TESTS:

### Mechanical

- |   |  |                          |
|---|--|--------------------------|
| 1. Crush test:                            | test method IEC 60794-1-2-E3:                                  | Procedure to IEC 60794-5 |
| 2. Impact test:                           | test method IEC 60794-1-2-E4:                                  | Procedure to IEC 60794-5 |
| 3. Kink test:                             | test method IEC 60794-1-2-E10:                                 | Procedure to IEC 60794-5 |
| 4. Flexibility test:                      | test method IEC 60794-1-2-E11:                                 | Procedure to IEC 60794-5 |
| 5. Tensile test                           | test method IEC 60794-1-2-E1:                                  | Procedure to IEC 60794-5 |
| 6. EN61386-22<br>Pliable conduit systems. | Conduit systems for cable management. Particular requirements. |                          |

### Fire

EN50575:2014 : Power, control and communication cables – Cables for general applications in construction works subject to reaction to fire requirements.

- |                           |                                |  |
|---------------------------|--------------------------------|--|
| 7. Heat Release:          | test method EN 50399           |  |
| 8. Vertical Burn          | test method IEC 60332-1        |  |
| 9. Corrosive gas Emission | test method BS EN 60754-2:2014 |  |
| 10. Smoke Emission        | test method BS EN 61034-2:2005 |  |
- EN13501-6:2014 Fire classification of construction products and building elements.

For further details of tests 7-10 see BRE Global reports P104087-1000-

*Note 1: Diameters and thicknesses are measured to the nearest 0.1mm.*

*Note 2: 'nominal' data is based on middle-spec, and is for information only, not for inspection purposes.*

*Note 3: Sketches are for information purposes only, and should not be used for inspection.*

*Note 4: When interpreting performance data and installing m/ds, bundles, or fibre units, it is assumed that the user has been trained by Emtelle.*

*Note 5: Users must establish the suitability of these products for their own applications.*

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