

## Bundles MULTIPACK DB

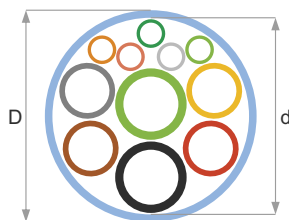


Bundles of **MULTIPACK - DB** are designed for direct installation into the ground and are for installation and mechanical protection of small fibre optic cables.

The wall thickness of the microtubes, and material used, allows for direct installation of the bundles into the ground. Pre-loaded microtubes save time during installation. The bundle has a big advantage of reinforcement the entire structure against bending. The assembly has a tendency to wave when laying in the trench. The less bending - waving, the easier it is for blowing and reaching a longer blowing length.

The bundle of hardened microtubes is installed in the thin protective tube. A bundle with a combination of different sized Microtubes is optional and depends on the inner diameter of the tube (d).

### Example of a MULTIPACK DB bundle



### Example of option

bundle	outer diameter	inner diameter	min. bending radius	examples of options	max. blowing pressure
	mm	mm		mm	
40/38,5	40	38,5	400	1x16/12, 10x7/3,5	15

### Design

- **HARDENED** microtubes DB are produced with an inner wall - smooth, grooved or grooved with sliding layer.
- Protective pipes are produced with a smooth inner wall and a smooth outer wall.

### Material

- High-density polyethylene (PE-HD).

### Temperature resistance

- Installation temperature: handling PE-HD pipes of -10° C to +50° C.
- Operating temperature: of -40° C to + 70° C.
- Storage temperature: -40° C to + 60° C.

### Resistance to induced currents

- Polyethylene is very good insulator. Induced currents do not occur in the pipe, even when it's in close proximity to piping systems that house high voltage.

### Resistance to environmental factors

- The chemical resistance of the microtubes is guaranteed through the use of PE-HD.

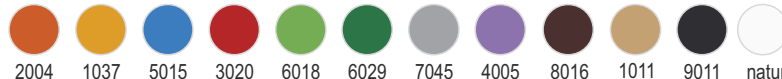
### The radius of the bend

- Radius bending has a min. of ten times the outer diameter of the packaged bundle (tubes).

### Bundles colours

- Microtubes are produced in colours according to customer's requirements. Colour differentiation is an advantage for identifying the microtubes when using more microtubes in one system.
- Standard colours: natural (white), light yellow, light green, light blue, light purple, light orange, light red, black.

RAL:



- Pipes are produced in colours according to customer requirements.



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### Labelling bundles

- Bundles can be labelled according to the DESCRIPTION given by customer during the manufacturing process.
- Individual microtubes may be provided with the required description. The text is usually in black and has a min. height of 2 mm. The inscription is repeated every 1m.

### Environment

- MIKROHARD microtubes and protective tubes do not harm the environment and can be fully recycled.

### Bundle packaging

- Returnable wooden drums, outer diameter of 2.25m, 0.80m drum core (0.95m), total width of the drums 1.2 m (max. installed length of 1,800m).
- Exterior is protected with stretch foil.
- The ends of the bundles are fitted with end caps, which prevent dirt from entering.

### Transport

- When loading transporting and unloading, it is necessary to prevent mechanical damage and deformation of the bundles.

### Storage

- Storage environment according to ETS 300 019-1-1, class 1.3E. Up to 3 months if stored outdoors in Central Europe.
- Sets must be protected against direct sunlight.

