

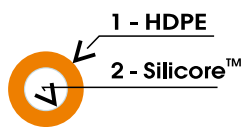
# MT MICRO 14/10 HDPE

version 11-2013

## DESCRIPTION, APPLICATION

Microduct is intended for protection of optical microcables. Structural part (1) is made from high density polyethylene (HDPE). Inner surface (2) is made from permanent sliding material Silicore™ with a very low coefficient of friction and standardly with fine ribs. Outer microduct's surface is smooth.

Microduct is not designed for permanent inner pressure.



Wall thickness and material classify the microduct as a Direct Burial (DB). Installation methods and conditions are described in the Installation manual. The microduct can be supplied also as a part of bundles DuraFlat™ and DuraMulti.

## LEGISLATION

The quality management system is certified acc. to ČSN EN ISO 9001. Microduct does not contain dangerous chemicals in accordance to the Directive 2006/1907/EC (REACH). Microduct meets VI requirements of the Directive 2002/95/EC (RoHS) – content of lead, cadmium, mercury, Cr<sup>VI</sup>, PBB, PBDE.

## PARAMETERS

The details to parameters are in company standard CWS 103-02.

Parameter	Value	Standard, conditions
Outer diameter (OD)	14±0,1 mm	CWS 103-02
Inner diameter (ID)	min. 9,9 mm	CWS 103-02
Wall thickness (WT)	min. 1,9 mm	CWS 103-02
Ovality	max. 5 %	CWS 103-02, before coiling
Blown ball test (BB test)	pass	CWS 103-02, ball diameter 8,0 mm
Inner coefficient of friction	max. 0,1	CWS 103-02
Burst pressure	min. 50 bar	ČSN EN ISO 1167-1, 2
Visual examination	free from defects	CWS 103-02
Crush - residual deformation	max. 15 % OD = max. 2,1 mm	ČSN EN 60794-1-2, E3, sample 200 mm, active 100 mm, force 1400 N, 3 mm/min., action 60 s, recovery 20 s
Crush - pressure force	min. 1000 N	ČSN EN 60794-1-2, E3, sample 200 mm, active 100 mm, ID deformation by 15 %, speed 3 mm/min.
Environmental Stress Crack Residence of HDPE resin used (ESCR)	min. 1000 hours	ASTM D 1693, method B
Impact	no damage after the test, dimens. in tolerances after recovery	ČSN EN 60794-1-2, method E4, striking surface radius 10 mm, impact energy 15 J, recovery time 1
Bending stiffness	min. 0,61 N.m <sup>2</sup>	CWS 103-02
Thermal expansion	*1,6.10 <sup>-4</sup> K <sup>-1</sup>	ISO 11359-2, temperature range from -20 °C to +70 °C
Longitudinal reversion	max. 3 %	ČSN EN ISO 2505, oven, 110 °C, 60 min.
Standard Dimension Ratio (SDR = OD/WT)	*7	-
Weight	*72 kg/km	-
Transport and storage temperatures	from -40 °C to +70 °C	-
Installation temperatures	from -10 °C to +50 °C	-
Operating temperatures	from -40 °C to +70 °C	-
Installation tensile force	max. 1010 N	-
Recommended cable dimens. for blowing	from 3,0 to 7,0 mm	-
Minimum bending radius	140 mm	-
Blowing pressure	max. 20 bar	max. 2 hours at max. +50 °C
Outdoor exposure limit	max. 12 months	Central Europe conditions

\* informative value

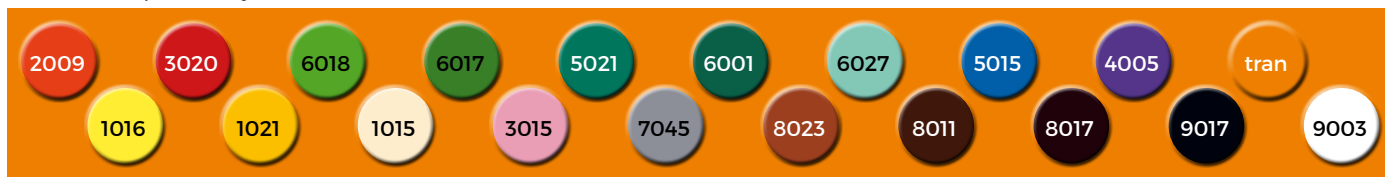
# MT MICRO 14/10 HDPE

## MODIFICATION

- **Standard** is a basic material version convenient for most applications.
- **UV stabilized** is more resistant to ultraviolet radiation. Storability is prolonged to 24 months at Central Europe outdoor conditions.
- **Antistatic** – lower electrical surface resistance.
- **Antirodent** is more resistant to rodents because of special repellent additives.
- **Preinstalled pulling cord** with tensile strength min. 300 N.

## COLOR LIST

Duct is supplied in natural white version or in a wide scale of the following RAL list. Longitudinal stripes with the same color are another possibility.



## MARKING

Duct is printed in whole length according to customer requirement. Printing color is contrasting to duct color. Printing can be doubled in opposite sides as an option. Printing scheme is repeating after 1 metre.

### Example of printing scheme:

MT MICRO DB 14/10 mm SILICORE 03/2009 LOT No 12345678 0000 m ><

## PACKING AND STORAGE

Microduct is wound on disposable drum (MTB) and coil is wrapped by stretch film. Microduct's ends are protected by plastic caps protecting them from impurities penetrating into microduct. End of microduct is minimally 10 mm under the flange edge. MTB flanges are regularly made from chipboard and have to be protected from moisture.

Option – MTB flanges can be made from Oriented Strand Board (OSB) which is waterproof.

MTB core diameter is 415 mm.

All drum dimensions are informative values.

Drum width is measured near center in place of axis. The periphery width can be higher up to 10 % because of pressure winded microducts.

Drum	Flange diameter (mm)	Drum width (mm)	Shaft hole diameter (mm)	Winding maximum length (m)	Informative weight of full drum with chip-board flanges (kg)
MTB 2	600	640	65	<b>300</b>	32
MTB 3	900	640	65	<b>1350</b>	115
MTB 7	1000	550	82	<b>1400</b>	123
MTB 9	1000	510	82	<b>1400</b>	122
MTB 12	1030	640	82	<b>2000</b>	168
MTB 13	1190	510	82	<b>2100</b>	188
MTB 17	900	500	65	<b>1000</b>	89
MTB 18	1100	740	82	<b>2600</b>	213