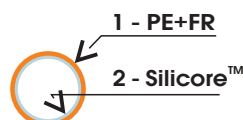


Microduct DuraMicro DI 12/10 mm LSHF

Microduct DuraMicro DI LSHF is intended for protection of optical microcables. It is used mainly in places where reduced flammability is required. Structural part (1) is made from compound of polyethylene (PE) and flame retardants (FR). The microduct is self extinguishing and formation of smoke is reduced during combustion (LS=Low Smoke). The microduct is halogen free (HF). Inner surface (2) is made from permanent sliding material Silicore™ with a very low coefficient of friction. Outer and inner microduct's surfaces are smooth. Microduct is not designed for permanent inner pressure.



Wall thickness and material classify the microduct as a Direct Install (DI) for installation to places with additional mechanical protection. Installation methods and conditions are described in the Installation manual. The microduct can be supplied also as a part of bundles DuraFlat™, DuraPack and DuraMulti.

The quality management system of Dura-Line CT 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 requirements of the Directive 2002/95/EC (RoHS) - content of lead, cadmium, mercury, Cr^{VI}, PBB, PBDE.

The details to parameters are in company standard CWS 104-03.

Parameter	Value	Standard, conditions
Outer diameter (OD)	12±0,1 mm	CWS 104-03
Inner diameter (ID)	min. 9,9 mm	CWS 104-03
Wall thickness (WT)	min. 0,95 mm	CWS 104-03
Ovality	max. 5%	CWS 104-03, before coiling
Blown ball test (BB test)	pass	CWS 104-03, ball diameter 8,0 mm
Inner coefficient of friction	max. 0,1	CWS 104-03
Burst pressure	min. 20 bar	ČSN EN ISO 1167-1, 2
Visual examination	free from defects	CWS 104-03
Crush - residual deformation	max. 15% OD = max. 1,8 mm	ČSN EN 60794-1-2, E3, sample 200 mm, force 282 N, 3 mm/min., action 60 s, recovery 20 s
Flammability	V-0	UL 94, specimen thickness 0,8 mm
Oxygen index	min. 30	ČSN ISO 4589-2, specimen I, method A
Spread of fire	pass	ČSN EN 61386-1, part 13.1.3
Smoke density - light transmittance	min. 60%	ČSN EN 61034-1 and 2
Combustion gas corrosivity - pH	min. 4,3	IEC 60754-2
Thermal expansion	*1,6·10 ⁻⁴ K ⁻¹	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)	*12	-
Weight	*40 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. 340 N	-
Recommended cable dimens. for blowing	from 3,0 to 7,0 mm	-
Minimum bending radius	120 mm	-
Blowing pressure	max. 16 bar	max. 2 hours at max. +50°C
Outdoor exposure limit	max. 12 months	Central Europe conditions

* informative value

MODIFICATION

Microduct DuraMicro DI 12/10 mm LSHF

- **UV stabilized** is more resistant to ultraviolet radiation. Storability is prolonged to 24 months at Central Europe outdoor conditions.
- **Antistatic** - lower electrical surface resistance.
- **Preinstalled pulling cord** with minimal tensile strength 300 N.

COLOR LIST

Microduct 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

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

Example of printing scheme:

DURA-LINE CT DuraMicro DI 12/10 mm LSHF 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.

The drums and lengths in the table are recommended. Other packing on request.

Drum	Flange diameter (mm)	Drum width (mm)	Shaft hole diameter (mm)	Winding maximum length (m)	Informative weight of full drum with chipboard flanges (kg)
MTB2	600	640	65	500	30
MTB3	900	640	65	2 000	100
MTB7	1 000	550	82	2 000	100
MTB8	1 030	640	65	2 600	130
MTB9	1 000	510	82	2 000	100
MTB12	1 030	640	82	2 600	130
MTB13	1 190	510	82	3 000	155
MTB16	1 250	740	65	4 900	230