



# Technical Data Sheet



## TIU-Duct HDPE 40/33 mm

- Application: mechanical and chemical protection of optical cables in the telecommunication net. The option to change already placed the optical cables. The duct is produced from High density polyethylene (HDPE) material of high quality which guarantee the duct resistance to water and to the most common chemical substances.
- The HDPE ducts have smooth or ribbed inner wall surface, lubricated by the silicon oil or by the special permanent LF (Low Friction) layer. Both options make easier the installation of optical cables. The outer wall surface is smooth.
- The colour of outer wall surface is in the required RAL shade. According to the requirements also with linear colour stripes, usually 4x1 stripes or 4x2 stripes. The number and the position of stripes can be modify according to requirements.
- The duct wall thickness and the type of used material guarantee its excellent mechanical properties and classify the HDPE duct as a „Direct Burial“ (DB).
- The HDPE duct does not contain dangerous chemicals in accordance to the Directive 2006/1907/EC (REACH). The HDPE duct does not contain compounds of lead, cadmium, mercury, chromium Cr<sup>VI</sup>, PBB (poly brominated biphenyl) a PBDE (poly brominated diphenylether), Directive 2002/95/EC – RoHS.

Parameter	Value	Standard, conditions
Outer diameter (OD)	40 +0,4 -0,1 mm	PN 64-004-99
Wall thickness	min.3,50 mm	PN 64-004-99
Ovality	max. 1,4 mm	ISO 11922-1, before coiling
Outer/ inner surface quality	without deformation	PN 64-004-99
Tensile Strength at Yield	15 MPa	ISO 6259-3
Tensile Strain at Break	350 %	ISO 6259-3
Resistance to internal pressure (23°C, 20 bar, 2 hours)	no damage	EN 1167-1,2
Impact resistance on drop tester (+23°C, 9 kg, 90 cm, 10 pcs)	no damage	EN 744
Compression test	min. 2500 N	EN 61386-24, 15% deformation of the inner diameter
Thermal length expansion coefficient	1,6 10 <sup>-4</sup> K <sup>-1</sup>	ISO 11359-2, range from -20°C to +70°C
Longitudinal reversion	max. 3%	EN ISO 2505, oven 110°C, 60 min
Weight	*385 kg/km	
Installation tensile force	max.7000 N	EN ISO 527
Minimum bending radius	18-20xD	PN 64-004-99
Blowing pressure	16 bar	
Transport and storage temperatures	from -40°C to + 55°C	-
Installation temperatures	from +5°C to +50°C**	-
Operating temperatures	from -40°C to +70°C	-
Lifetime	50 years	after the installation

\* Informative value

\*\* It is necessary to contact the producer when you install the duct at temperatures below +5°C.



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### Types:

- **Standard** from high quality HDPE material suitable for most applications.
- **UV stabilized** is more resistant to ultraviolet radiation.
- **With installed retractable cord**

### Colours:

RAL 9003	RAL 7004	RAL 1018	RAL 2003	RAL 3020	RAL 3015	RAL 4005	RAL 5018	RAL 5015

RAL 5003	RAL 6018	RAL 5021	RAL 8004	RAL 9017

### Printing:

The HDPE ducts are contrast printed by (INK-JET) with basic identification – length, producer name, seller name, type, dimension, date and time of production, (see example). The printing is possible to change according to customer demand.

#### Printing example

>170 m< TIU-PLAST seller HDPE 40/33 08/11/2018 13:21 E

### Packaging:

The HDPE ducts are usually delivered:

- in 200 m or 300 m coils
- on the wooden drum in the length from 1000 to 2000 m. The drum dimensions are available at the customer request
- with the special plastic caps which protect the ducts ends from the pollution and water penetration