

Protective tubes
and microtubes







CERTIFICATE

Management Systems Certification Body No. 3053
TÜV SÜD Czech s.r.o.

confirms that



MATEICIUC a.s.
Ke koupališti 370/15
CZ - 742 35 Odry
Ident. No.: 60792825

has established and applies
a quality management system for

**production and sale of extruded, injected
and blow-moulded plastic products**

**production of ventilation ducting
and other construction elements**

Based on the audit performed, Report No. **15.950.443**
compliance with the requirements of the standard
has been proved according to

ISO 9001:2015

This certificate is valid from **12.04.2024** until **04.04.2027**

Certificate registration No. **15.950.409**




In Prague on 12.04.2024



DUOHARD DUOFLEX

Double-walled protective pipes DUOHARD and DUOFLEX are primarily intended for the mechanical protection of cables laid in excavations and cable trenches. They are particularly suitable for demanding sections of cable routes, such as watercourses, railway crossings and roads. The pipes can also be used to protect water and gas pipelines, drainage systems and gravity sewers.

Protective pipes comply with ČSN EN 50626-1 Conduit systems buried underground for the protection and management of insulated electrical cables or communication cables. They have been certified by the Testing and Certification Institute in Zlín.

Design and installation guidelines for MATEICIUC plastic cable pipes, prepared by the EGÚ Power Engineering Institute Brno (Power Networks Department), are available on request.

DESIGN

- outer wall - corrugated
- inner wall - smooth (slight corrugation provides excellent flexibility without reducing the cable passage in bends while maintaining high mechanical strength)
- pipes in standard lengths are supplied with a factory-fitted coupling on one end

MATERIAL

- DUOHARD - outer and inner walls are made of HDPE
- DUOFLEX - outer walls are made of HDPE; inner walls are made of LDPE+MDPE (diameters 40, 50 and 63 mm), HDPE+LDPE (diameters 75 and 90 mm) or HDPE (diameters 110 mm and above)

COLOUR

- outer wall: red, black or blue
- inner wall: black

MECHANICAL RESISTANCE

- high mechanical resistance owing to the corrugated outer wall
- excellent impact resistance even at low temperatures
- minimum compression resistance: 450 N/200 mm (code 450)
- impact resistance: normal (code N)
- maximum allowable top load for the protective pipes is specified in the design and installation instructions issued by MATEICIUC a.s.
- mechanical properties of the pipes comply with ČSN EN 50626-1

HEAT RESISTANCE

- handling temperature: 0 °C to +50 °C
- operating temperature: -40 °C to +70 °C
- storage temperature: -40 °C to +60 °C

FIRE RESISTANCE

- PE pipes are classified as Class C3 according to ČSN 73 0810

RESISTANCE TO INDUCED CURRENTS

- polyethylene is an excellent electrical insulator
- no induced currents are generated in the protective pipe, even when installed near high-voltage cable routes

IDENTIFICATION

- Ink-jet marking: 0101040 ČSN EN 50626-1 N 450 CE manufacturing date (example for DN 40 pipe)
- individual coils and pallets are supplied with identification labels indicating the manufacturer's name and address, protective pipe type, nominal size, and quantity

PIPE CONNECTION

- pipes are connected using slip couplings

DRAWING ELEMENT AND CABLE INSTALLATION

- DUOFLEX protective pipes in coils (25 m and 50 m) are supplied with a factory-installed draw cord (PV-PAD tape, 1.2 mm thick, or PP cord, 12,500 dtex)
- cables must be installed by pulling; blowing is not possible
- smooth inner walls ensure easy cable installation

ENVIRONMENT

- the material is fully recyclable

TRANSPORT

- protect plastic pipes against mechanical damage and deformation during transport, loading and unloading

STORAGE

- coils must be stored in a horizontal position; maximum stacking height: 2.8 m; maximum storage time: 3 months
- storage in direct sunlight is not recommended. Pipes with diameters of DN 40, 50, 63, 75 and 110 do not contain a UV stabiliser. Pipes with diameters of DN 90, 125, 160 and 200 contain a UV stabiliser
- ambient conditions must comply with ETS 300 019-1-1, class 1.3E

LAYING

- observe all applicable laws, regulations and technical standards when installing protective pipes for power and communication cables
- to ensure the required mechanical strength of the protective pipes, follow the installation instructions issued by MATEICIUC a.s.
- avoid bending radii smaller than specified and excessive force when installing couplings and fittings. Observe the maximum allowable load
- protect the pipe ends during installation to prevent dirt from entering the pipe, which could damage the cable
- after installing the cable, seal both pipe ends to prevent dirt ingress
- seal the ends of any unused pipes (if installed)

ACCESSORIES

- coupling
- plug
- sealing ring
- spacer

outer diameter mm	inner diameter mm	DUOFLEX			DUOHARD	
		coil length m	minimum bending radius m	pallet length m	rod length m	pallet length m
40	32	50	0.20	1200	-	-
50	40	50	0.23	400	-	-
63	51	50	0.26	-	-	-
75	61	50	0.33	350	-	-
90	75	50	0.35	300	-	-
110	94	50	0.40	200	6	456
125	105	50	0.50	-	6	408
160	136	50	0.64	-	6	168
200	171	25	0.75	-	6	162

EU DECLARATION OF CONFORMITY

No. 02.1-EU-2026-EN

Producer: MATEICIUC a.s., Ke Koupališti 370/15, 742 35 ODRY, Czech Republic
VAT: CZ60792825

we declare under our sole responsibility that:

1) Product

Protective pipes DUOFLEX (flexible) d 40 mm – d 200 mm and pipes DUOHARD (rigid) d 75 mm – d 225 mm, connected with double plastic fittings for electric installation buried underground.

2) Type:

Type DUOFLEX(flexible)								
d 40	d 50	d 63	d 75	d 90	d 110	d 125	d 160	d 200
0101040	0101050	0101063	0101075	0101090	0101110	0101125	0101160	0101200

Tape DUOHARD (rigid)								
/	/	d 75	d 90	d 110	d 125	d 160	d 200	d 225
		0102075	0102090	0102110	0102125	0102160	0102200	0102225

3) Subject of the declaration

Polyethylene protective pipes for the protection and management of insulated conductors and/or power cables or communication cables buried underground. DUOFLEX (flexible) d 40 mm, d 50 mm, d 63 mm, d 75 mm, d 90 mm, d 110 mm, d 125 mm, d 160 mm, d 200 mm. DUOHARD (rigid) d 75 mm, d 90 mm, d 110 mm, d 125 mm, d 160 mm, d 200 mm, d 225 mm. Resistance to compression is min. 450 N/200 mm, impact resistance normal (code N).

4) The subject of this declaration described above conforms with the relevant European Union standardisation legislation and other regulations:

EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 2014/35/EU dated 26 February 2014.

Act No.90/2016 Sb. as amended.

Government Regulation No. 118/2016 Sb. as amended.

5) References to the relevant harmonised standards used or references to the other technical specifications in relation to which conformity is declared:

Standard ČSN EN 50626-1 Conduit systems buried underground for the protection and management of insulated electrical cables or communication cables.

CERTIFICATE No. 25 0258 T and in final protocol No.375200100/2025.

Issued by: INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a.s. třída Tomáše Bati 299, Louky, 763 02 Zlín, Czech Republic.

6) We hereby confirm that:

The EU Declaration was issued in accordance with Act No.90/2016 Sb. as amended.

The MATEICIUC a.s. Company, is certified according to ČSN EN ISO 9001:2015.

In case of mechanical compaction of layers above the protector, take care not to exceed the value of the load capacity of the protector.

The product is not intended for use other than that indicated in the "Subject of the declaration".

This EU Declaration of Conformity supersedes all prior statements issued for this type of product.

In Odry date 24. 2. 2026



Alois Mik
Sales & technical support

Appendix No.1 to EU Declaration of Conformity No. 02.1-EU-2026-EN.

ACCESSORIES:

Couplings, PE material, resistance to external influences IP 40 without sealing rings.

Identification	Name
071010040	Coupling 40
071010050	Coupling 50
071010063	Coupling 63
071010075	Coupling 75
071010090	Coupling 90
071010110	Coupling 110
071010125	Coupling 125
071010160	Coupling 160
071010200	Coupling 200

Identification	Name
071010040	Sealing ring 40
071010050	Sealing ring 50
071010063	Sealing ring 63
071010075	Sealing ring 75
071010090	Sealing ring 90
07113110	Sealing ring 110
07113125	Sealing ring 125
07113160	Sealing ring 160
07113200	Sealing ring 200

Spacers, PP material.

Identification	Name
07114040	Spacer 40/10 (2x5)
07114090	Spacer 90/8 (4x2)
072141108	Spacer 110/8 (4x2)
07114125.1	Spacer 125/8 (4x2)
072142008	Spacer 200/8 (4x2)

End cap, PE material.

Identification	Name
072120401	End cap 40
076002050	End cap 50
076002063	End cap 63
076002075	End cap 75
076002090	End cap 90
07112110	End cap 110
07112125	End cap 125
076002160	End cap 160
076002200	End cap 200





OPTOHARD

Single-wall protective pipes OPTOHARD are primarily intended for the mechanical protection of optical and coaxial cables installed in trenches and channels (construction and reconstruction of transmission lines). The mechanical properties of HDPE protective pipes and the low friction coefficient of the inner surface enable trouble-free cable installation over long distances (up to 3000 m under ideal conditions). Cables can be installed into the pipe using pulling or blowing technology.

Protective pipes comply with ČSN EN 50626-2 Conduit systems buried underground for the protection and management of insulated electrical cables or communication cables. They have been certified by the Testing and Certification Institute in Zlín.

Project and laying instructions for plastic cable pipes produced by MATEICIUC a.s. (prepared by EGU Power Engineering Institute Brno, Power Network Department) are intended to facilitate design activities.

DESIGN

- outer wall - smooth
- inner wall - smooth or longitudinally grooved
- pipe ends are fitted with protective plugs to prevent dirt ingress

MATERIAL

- HDPE

COLOUR

- on request, pipes of the same colour can be differentiated using one, two or three longitudinal stripes along the pipe at 90° intervals

- minimum colour stability of 10 months under outdoor exposure

MECHANICAL RESISTANCE

- high mechanical resistance even at low temperatures
- resistance to compression in min. 750 N/200 mm (code 750)
- impact resistance normal (code N)
- maximum allowed top load of protective pipes is shown in project and laying instructions issued by MATEICIUC a.s.
- mechanical properties of pipes comply with ČSN EN 50626-2

HEAT RESISTANCE

- handling temperature: +5 °C to +50 °C
- operating temperature: -40 °C to +70 °C
- storage temperature: -40 °C to +60 °C
- extra care must be taken during handling at temperatures below 0 °C

FIRE RESISTANCE

- PE pipes are classified as Class C3 according to ČSN 73 0810
- maintain a minimum distance of 1 m from heat sources

RESISTANCE TO INDUCED CURRENTS

- polyethylene is an excellent electrical insulating material
- no induced currents are generated in the duct, even when installed near high-voltage cable ducts

IDENTIFICATION

- standard identification: pipe type and dimension in mm * producer * relevant technical standard * N 750 * manufacturing date * length in m
- at the customer's request, the logo and the manufacturer's name can be replaced with another logo and name
- the identification is printed in 1 m intervals
- the lettering is standard black and min. 4 mm in size

PIPE CONNECTION

- mechanical couplings

ENVIRONMENT

- the material is fully recyclable

TRANSPORT

- protect plastic pipes against mechanical damage and deformation during transport, loading and unloading

STORAGE

- small coils must be stored in horizontal position, maximum stacking height 2 m
- shelf life is 36 months when stored indoors and protected from direct sunlight
- shelf life is 9 months when stored outdoors in Central European conditions; on request, enhanced UV resistance can extend the shelf life to 18 months
- pipes must not be placed on sharp edges, bent, or subjected to permanent one-sided loading
- we recommend observing the requirements of ČSN 64 0090 "Storage of Plastic Products" and generally accepted practices

LAYING

- observe all applicable laws, regulations and technical standards when installing protective pipes for power and communication cables
- to maintain the maximum mechanical strength of protective pipes, follow the installation instructions issued by MATEICIUC a.s.
- use suitable protection for pipe ends during installation in soil to prevent contamination inside the pipe, which could damage the cable
- after installing the cable, seal both pipe ends to prevent dirt ingress
- seal the ends of any unused pipes (if installed)

ACCESSORIES

- I, Y, T-branch joint coupling
- vented end coupling
- spacer
- cable gland

outer diameter	inner diameter	length on wood reel	dimension of wood reel	length on coil	dimension of coil
mm	mm	m	cm	m	cm
32	27	2 500	225x117	200	137x27
32	27	2 500	225x117	300	148x30
40	33	1 800	225x117	100	130x29
40	34	1 800	225x117	200	142x38
40	34	1 800	225x117	300	150x46

EU DECLARATION OF CONFORMITY

No. 01-EU-2026-EN

Producer: MATEICIUC a.s., Ke Koupališti 370/15, 742 35 ODRY, VAT: CZ60792825, Czech Republic
we declare under our sole responsibility that:

1) Product

Smooth pipes (protective pipes) made of PE-HD, connected with PP mechanical fittings, for protection of cables buried underground. Type OPTOHARD, d 32 mm – d 50 mm.

2) Type:

OPTOHARD			
D 32 x 2,5	D 40 x 3	D 40 x 3,5	D 50 x 4,2
010303202	01030400301	010304003	010305003

3) Subject of the declaration

Smooth pipes made of PE-HD, type OPTOHARD, d 32 mm – d 50 mm, are intended as for the protection of insulated conductors and/or power cables or communication cables in trenches and cable ducts laid underground. Predicted service time of the installed conduit min. 50 years. Impact resistance is normal (code N).

4) The subject of this declaration described above conforms with the relevant European Union standardisation legislation and other regulations:

EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 2014/35/EU dated 26 February 2014.

Act No. 90/2016 Sb. as amended.

Government Regulation No. 118/2016 Sb. as amended.

5) References to the relevant harmonised standards used or references to the other technical specifications in relation to which conformity is declared:

Standard ČSN EN 50626-2 Conduit systems buried underground for the protection and management of insulated electrical cables or communication cables.

The assessment is given in CERTIFICATE No. 25 0475 T and in final protocol No. 375200112/2025.

Issued by: Product Certification Body INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a.s. třída Tomáše Bati 299, Louky, 763 02 Zlín, Czech Republic. Divize CSI – Centrum stavebního inženýrství.

6) Additional information:

The EU Declaration was issued in accordance with Act No. 90/2016 Sb. as amended.

The MATEICIUC a.s. Company, is certified according to ČSN EN ISO 9001:2015.

In case of mechanical compaction of layers above the protector, take care not to exceed the value of the load capacity of the protector.

The product is not intended for use other than that indicated in the "Subject of the declaration".

This EU Declaration of Conformity supersedes all prior statements issued for this type of product.

Appendix No.1 to EU Declaration of Conformity No. 01-EU-2026-EN

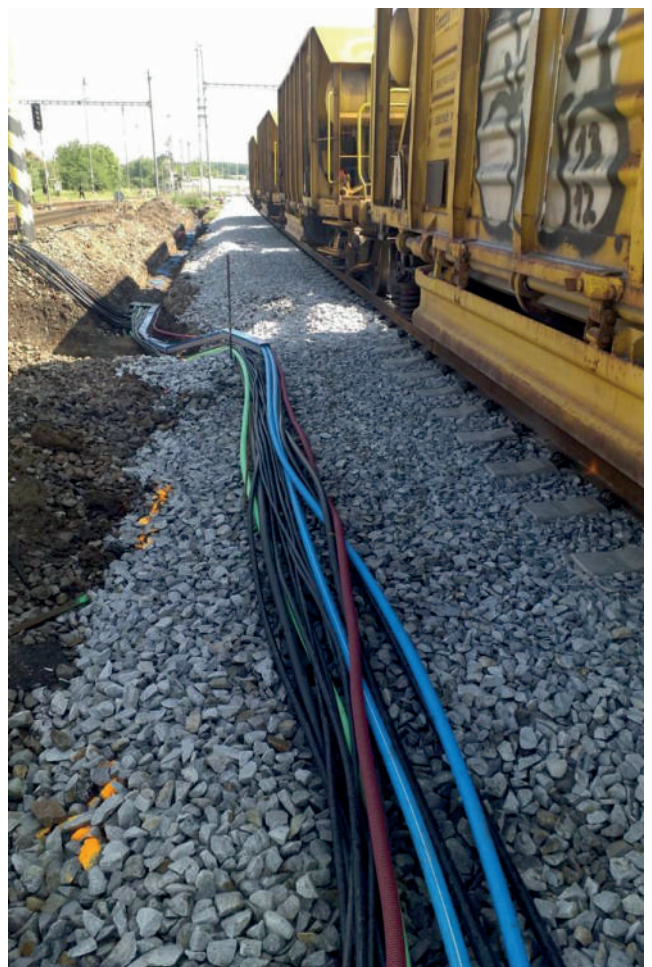
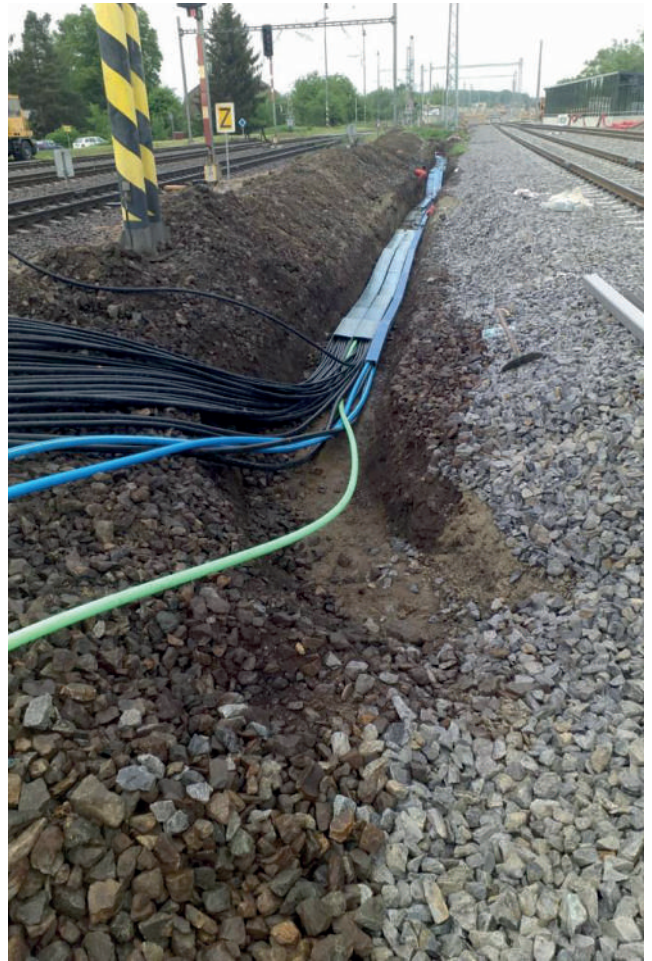
ACCESSORIES:

Couplings, endings,
PP material

Identification	Name
061010322	Coupling PLAS-FIT 32/27
061120321	Ending PLAS-FIT 32/27
061120322	Ending with valve PLAS-FIT 32/27
061010402	Coupling PLAS-FIT 40/33
061120401	Ending PLAS-FIT 40/33
061120411	Ending with valve PLAS-FIT 40/33



Alois Mik
Sales & technical support





MIKROHARD

Single-wall protective pipes MIKROHARD are designed for modern microduct technology used in FTTx (Fibre-to-the-X) optical networks. Microducts can be installed in existing HDPE protective pipes (MIKROHARD DI) or directly buried in the ground without the need for an additional protective pipe (MIKROHARD DB).

Different numbers of microducts can be installed inside OPTOHARD protective pipes depending on their inner diameter and the outer diameter of the microducts. The required number of microducts depends on the number of optical fibres in the installed microcables.

DESIGN

- standard (DI)
 - inner wall grooved
 - outer wall smooth
- hardened (DB)
 - inner wall grooved
 - outer wall smooth

STANDARD PRIMARY MICRODUCTS (DI)

- designed for installation in existing OPTOHARD protective pipes, both empty and partially occupied. Microducts can be installed by blowing or pulling over shorter distances.

HARDENED MICRODUCTS (DB)

- designed for installation in trenches during the construction of new access networks without additional protective pipes. The reinforced wall structure and mechanical properties of these microducts provide reliable protection for optical microcables.

Standard primary microducts (DI)

outer diameter	inner diameter	length on drum	bending radius	max. installation tension force at 20 °C	max. blowing pressure
mm	mm	m	mm	N	bar
7	5.5	2 500	70	200	16
10	8	2 500	100	380	16
12	10	2 500	120	490	16
14	12	1 500	140	500	16

MATERIAL

- HDPE
- with UV stabiliser on request

COLOUR

according to RAL



2004 1037 5015 3020 6018 6029 7045 4005 8016 1011 9011 natur

PACKAGING

- supplied on drums with plywood flanges and a pressed paperboard core

HEAT RESISTANCE

- handling temperature: +5 °C to +50 °C
- operating temperature: -40 °C to + 70 °C
- storage temperature: -40 °C to + 60 °C

IDENTIFICATION

- standard identification marking: product name*material*dimension*type*production date*length
- identification marking is repeated at 1 m intervals
- the marking is black as standard and has a minimum height of 2 mm

ENVIRONMENT

- the material is fully recyclable

STORAGE

- maximum storage time up to 3 months when stored outdoors in Central Europe
- storage in direct sunlight is not recommended. The product does not contain a UV stabiliser

ACCESSORIES

- connector and end cap – Direct Install (DI) / Direct Buried (DB)
- connector GR/WB
- split end cap GB/WB
- plug

Drum dimension

front diameter	core diameter	drum width	bore diameter
mm	mm	mm	mm
900	300	600	75.5

Hardened microducts (DB)

outer diameter	inner diameter	length on drum	bending radius	max. installation tension force at 20 °C	max. blowing pressure
mm	mm	m	mm	N	bar
7	3.5	2 500	60	390	20
7	4	2 500	70	350	20
10	5.5	2 500	100	750	20
12	8	2 000	120	760	20
14	10	1 500	140	980	20
16	12	1 250	160	980	15
20	16	700	500	1 000	16



MULTIPACK DB

MULTIPACK DB is a bundle of high-strength microducts enclosed in a protective sheath, providing mechanical protection for optical cables.

The main advantage is reduced installation costs for new telecommunications networks due to pre-installed MIKROHARD DB microducts.

DESIGN

- microducts – smooth inner and outer walls
- the sheath fits tightly around the bundle of microducts but is not bonded to them

MATERIAL

- microducts - HDPE
- sheath - HDPE (minimum thickness 0.8 mm)

COLOUR

- microducts - according to RAL

RAL



- sheath - natural transparent or RAL colour on request

PACKAGING

- coil – length 200 m, size 120x45 cm
- reel – dimensions differ depending on the type of bundle and the required length
- the ends of the bundles are fitted with plastic end caps, which prevent dirt from entering the microducts

DIMENSIONS AND NUMBER OF TUBES IN THE BUNDLE

- on request

LENGTH ON THE DRUM

- on request

MECHANICAL RESISTANCE

- suitable for direct burial without the need for additional protective pipes

HEAT RESISTANCE

- handling temperature: +5 °C to +50 °C
- operating temperature: -40 °C to + 70 °C
- storage temperature: -40 °C to + 60 °C

ENVIRONMENT

- the material is fully recyclable

STORAGE

- maximum outdoor storage time: up to 3 months in Central Europe
- storage in direct sunlight is not recommended. The product does not contain UV stabiliser



SINGLE-WALL SPLIT PROTECTIVE PIPE

The split protective pipe system is designed to provide additional mechanical protection for existing underground power and communication cables. It is intended for use during industrial and road construction, railway, airport and power plant projects, where cables have already been installed.

DESIGN

- smooth inner and outer walls
- rigid construction consisting of two identical halves

MATERIAL

- HDPE

COLOUR

- outer wall – red, blue
- inner wall – black

PACKAGING

- supplied pre-assembled

MECHANICAL RESISTANCE

- high strength
- corrosion-resistant

CONNECTION

- the two halves snap together using integral longitudinal locking profiles

ENVIRONMENT

- the material is fully recyclable

outer diameter	inner diameter	length	quantity per pallet
mm	mm	m	m
110	100	3	180
160	150	3	72



MATEICIUC a.s.

Ke Koupališti 370/15,
CZ - 742 35 Odry
telefon: +420 556 312 411
e-mail: marketing@mateiciuc.cz
www.mat-plasty.com