

# Double-walled protective pipes DUOFLEX and DUOHARD



Double-walled protective pipes **DUOHARD** and **DUOFLEX** are intended, primarily, for mechanical protection of cables laid in excavations and cable trenches. Generally, they are used for difficult section of cable routes such as, water courses, railway crossings, motorways. The pipes provide additional protection of water and gas supply lines, drainage or sloped sewers.

**DUOHARD** and **DUOFLEX** protective pipes comply with ČSN EN 61386-24: Conduit systems for cable management (Part 24: Particular requirements – Conduit systems buried underground). 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 Dept.), are intended to facilitate project activities.

outer diameter	inner diameter	DUOFLEX		DUOHARD	
		standard production length (coils)	bend radius	standard production of rods	pallets length
mm	mm	m	m	m	m
40	32	50	0,20	-	-
50	40	50	0,23	-	-
63	51	50	0,26	-	-
75	61	50	0,29	6	552
90	75	50	0,33	6	600
110	94	50	0,37	6	570
125	105	50	0,40	6	408
160	136	50	0,43	6	198
200	171	25	0,50	6	138

#### PIPE DESIGN

- Outer wall - corrugated for higher mechanical strength of the pipe.
- Inner wall - smooth for easy cable installation. Slight corrugation provides for excellent flexibility, does not reduce passage capacity through the pipe in bends and maintains high strength.

#### MATERIAL

- **DUOHARD** - outer and inner walls are made of PE-HD.
- **DUOFLEX** - outer walls are made of PE-HD, inner wall are made of PE-LD (for diameters of 40, 50 or 63 mm) and of PE-HD (for diameters from 75 mm).

#### MECHANICAL STRENGTH

- **DUOFLEX** and **DUOHARD** protective pipes feature high mechanical strength owing to corrugated outer wall. PE-HD guarantees excellent impact resistance even at extreme temperature. Maximum allowed top load of protective pipes is shown in project and laying instructions issued by MATEICIUC a.s.
- Mechanical properties of **DUOFLEX** and **DUOHARD** pipes comply with relevant technical standards ČSN EN 61386-24.

#### HEAT RESISTANCE

- Installation temperature: handling PE-HD pipes within of -5° C to +50° C.
- Operation temperature: of -40° C to +70° C.

#### FIRE RESISTANCE

- PE pipes are included in C3 inflammation class according to ČSN 73 08 23.

#### INDUCTION CURRENT RESISTANCE

- Polyethylene is a very good insulating material. No induction current is generated within the pipeline, even in the vicinity of high voltage cable ducts.

#### CHEMICAL RESISTANCE

- Chemical resistance of pipes is guaranteed by the production material (HDPE).

#### PIPE CONNECTION

- The pipes are connected using slide-on couplings. Pipes of both production lengths (6 m, 25 m, 50 m) are delivered with a coupling on one end.

#### COLOUR DESIGN

- Outer wall - red, black or blue (standard colours).  
Inner wall - black (standard).
- The durability and Chemical resistance of the colour agent is, at least, equal to that of the protective pipe, provided storage in compliance with manufacturer's instruction. Protective pipes contain colour agents "8" according to DIN 53388 (the eight-degree range as specified in DIN 54003, i.e. "8" - the best, "1" - the worst).
- Special colours on request (limited quantity).



