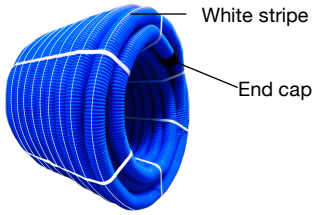
FLEXIUM
CORRUGATED PIPE IN COILS

Telecommunications from 38 to a 100 mm in coils

TECHNICAL SPECIFICATIONS

Description:

Curvable corrugated conduit double wall (S-type) pipe, with corrugated outer wall in blue, stripe line in white and inner liner in white color; made from high density polyethylene (HDPE) virgin compounds in coils, for underground telecommunications wiring systems.



Scope

This product specification describes ADSM curvable corrugated Conduit double wall pipes, Flexium commercial brand, in nominal diameters from 38 through 100 mm (1½ to 4 inch); for use in underground telecommunications systems.

Characteristics

- The double wall structure (corrugated outer layer and smooth inner liner) optimizes the performance of the most important mechanical properties, such as flattening, brittleness, stiffness, etc.
- Resistant to moisture, chemical and corrosive agents of the soil.
- Low friction coefficient, between 0.15 y 0.20, to facilitate wiring.
- Availability of supply different lengths according with the requirements of the project or customer.
- Every coil includes end cap and plastic pre-guide to facilitate the traction of the main guide.
- Availability in other exterior colors, such as: black, yellow, white, green and gray.

Uses

For underground telecommunication transmission lines, constructed by channeling in the open (trench), either direct buried or concrete encased, applicable in:

- Telecommunications systems, such as: voice, audio, video, data, interactive services, telephony, optical fiber, etc.; The standard for electrical installations NOM-001-SEDE-2012 allows the use of pipes with a nominal diameter of 38 to 100 mm.
- Auxiliary systems of electrical systems, such as: protection, control and measurement.
- PPV TV systems.

Dimensions

Table 1. HDPE curvable corrugated conduit pipes, Flexium commercial brand, dimensions

Product Code	Nominal Diameter		Inner Diameter (Average)	Outer Diameter (Average)	Available Area	Standard Length
	(mm)	(inch)	(mm)	(mm)	(mm^2)	(m)
38160335PEA	38	1½	38	48	1 134	100
02160335PEA	50	2	51	64	2 043	100
03160335PEA	75	3	76	95	4 536	100
04160335PEA	100	4	102	120	8 171	100

The pipe can be curved to a radius of 10 times its outer diameter.

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Material properties

Curvable corrugated flexium pipes are manufactured from high density polyethylene (HDPE) virgin compounds that comply with the requirements of the Table 2.

Table 2. HDPE virgin compounds properties

Property	Specification	Test method
Density	From 0.947 to 0.955 g/cm^3	NMX-E-004-CNCP-2004 NMX-E-166-CNCP-2016
Melt index	From 0.4 to 1.0 g / 10 min at 190 °C and 2.16 kg	NMX-E-135-CNCP-2004
Flexural modulus	From 552 to 758 MPa (80 000 to 110 000 psi)	NMX-E-183-CNCP-2010
Tensile strength	From 21 to 24 MPa (3000 to 3500 psi)	NMX-E-082-CNCP-2010
Slow Crack Growth Resistance	Test condition B (100% Igepal), 24 h and 50% of maximum failure	NMX-E-184-CNCP-2003

Mechanical specifications

ADS Mexicana Flexium curvable corrugated pipes comply with the mechanical specifications, requirements and test methods of the Table 3.

Table 3. HDPE curvable Flexium corrugated mechanical specifications

Specification	Description	Test method
Pipe impact strength	There shall be no evidence of splitting, cracking, breaking, separation of corrugation seams, separation of the valley and liner, or combinations thereof, on any specimen when impact the specimen with an energy of 46.59 J	Section 7.4 of the NMX-E-242/1-ANCE-CNCP-2005
Pipe flattening	There shall be no evidence of splitting, cracking, breaking, separation of corrugation seams, separation of the valley and liner, or combinations thereof, on any specimen between parallel plates test when pipe inside diameter is reduced by 20%	NMX-E-014-CNCP-2014
Pipe stiffness	At least 345 kPa (50 psi) @ 5% of inner diameter deflection	NMX-E-208-CNCP-2015
Delamination	There shall be no evidence of a separation between the inner liner and outer corrugated wall when the specimen is cut circumferentially after flattening test	Section 7.5 of the NMX-E-242/1-ANCE-CNCP-2005

Installation

Installation must be carried out in accordance with the recommendations set forth in the standard NOM 001-SEDE-2012, as well as in the ASTM D2321-18 standard.

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