



Connect and Protect

TransTechnical Solutions

HDPE CONDUIT

Engineers often specify or use uPVC sewer and water pipes as conduits for buried electrical and telecommunication cables. However these pipes are not designed for electrical applications, they are designed for conveying sewage and water.

HDPE conduit is a revolutionary, purpose designed flexible cable conduit system. It has a unique double walled corrugated construction and is manufactured from high density polyethylene (HDPE).



Technical Specifications:

Description:

SANS 61386-24 Class N ISO 9001:2008

Supplied in lengths of 6 meters, or coils of 50 meters, complete with couplings – see tables included. The manufacturer's Quality Management System is certified to UNI EN ISO 9001:2008. Pipes conform to SANS 61386-24 and are marked as Class N with crush resistance of higher than 450 N.

General Features:

Flexibility:

Due to the inherent flexibility the number of fittings such as pre-formed bends can be kept to a minimum. It also facilitates installation as the conduit can be laid around immovable obstructions. It is ideal for use in under road boring applications.

Friction:

Has a waxy paraffin like surface with a low co-efficient of friction which makes the draw-in of cables very easy. The co-efficient of friction with a polyethylene sheathed cable is only 0.3. This means lower cable pulling forces, longer pulls, and less cable stretch and damage.

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Jointing:

Is joined by means of push fit couplings (which provide an IP30 index of protection). Special cutting tools are available for quick and accurate cutting of the conduit.

Sizes:

Is available in four sizes (50mm, 75mm, 110mm, 160mm). The size is quoted as TKF followed by the nominal outside diameter in millimetres.

Sizes TKF75, TKF110 and TKF160 are supplied in 6 metre straight lengths with a knock on coupling and have a double wall construction. Sizes TKF50, TKF75, TKF110 and TKF160 are also available in a very flexible version supplied in coils. They have a double wall construction and are supplied complete with a coupling and a pilot string with a breaking strain of 30kgf. This string should only be used to pull in a more substantial hauling rope.

Different lengths are available on request.

CONDUIT SIZE	TKF50/FL		TKF75/FL		TKF110/FL		TKF160/FL
Outside diameter (mm)	50		75		110		160
Inside diameter (mm)	40		63		95		137
Standard straight length (m)	n/a		6		6		6
Standard length coils (m)	50		50		50		25
Min. bending radius (mm) 6m length	n/a		1 400		2 500		4 000
Min. bending radius (mm) coils	150		250		350		450



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Chemical Resistance :

It is highly chemically resistant. It is unaffected by acids or alkalis in the most aggressive soils and is also resistant to petroleum. A detailed chemical resistance specification is available on request.

Impact Resistance:

Impact resistance is a measure of how easily a pipe splits or cracks when subjected to an impact force. Pipes with a low impact strength will tend to crack and split when handled roughly or when plate compactors are used during installation. Has a far superior impact strength to uPVC sewer pipes especially at low temperatures, which means easier handling and less breakages.

Compression Resistance:

Has excellent compression resistance, or “ring stiffness” due to the reinforcing effect of the external corrugations. Has more than 5 times the ring stiffness of normal duty uPVC sewer pipe** (550kPa versus 100kPa). High ring stiffness is an important consideration where conduits are buried in areas with high superimposed loads, for example at road crossings. All buried cable conduits should have a ring stiffness of at least 450kPa.

**110mm pipe to SABS 791-1986

Temperature Resistance:

Has an upper working temperature of 100°C versus 60° C for uPVC pipe (measured in accordance with DIN53446). The thermal conductivity of HDPE (0.4W/mK) is also better than uPVC (0.14W/mK) which means better dissipation of heat generated by cables.

UV Resistance:

Is designed to be buried underground, however, it is UV resistant and can be stored outdoors for up to one year.



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