totrapipes

# TOTRA PROTECT

Program TOTRA PROTECT is designed to protect the complex and expensive infrastructure when connecting the regions and local areas to energy resources, telecommunications and other areas of transfers of energy, signals and pulses

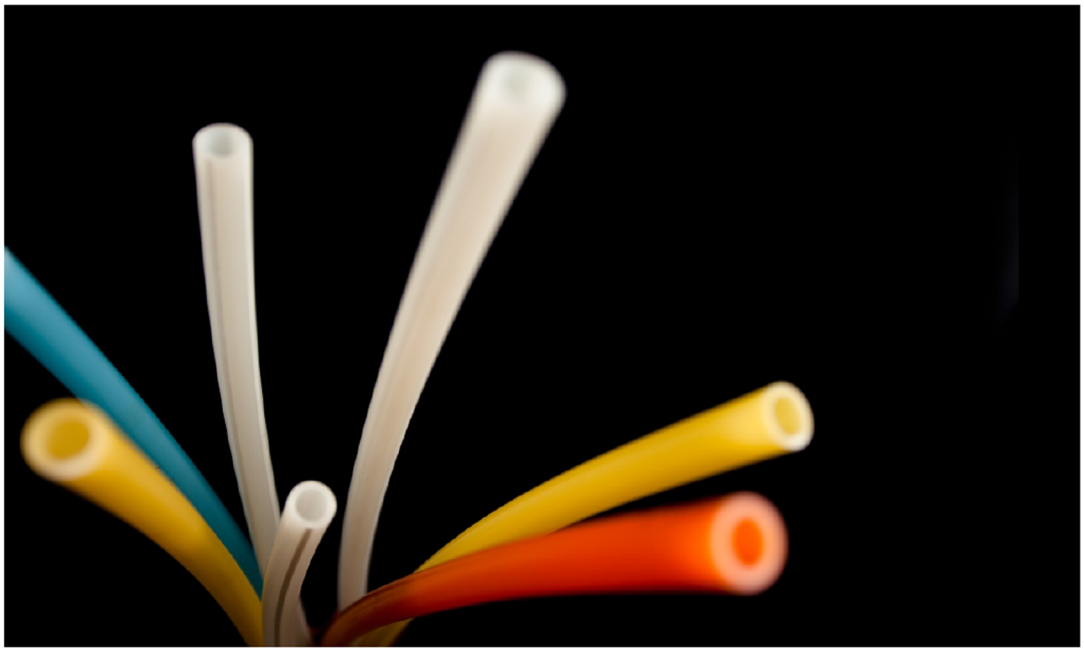
Compared to other materials, the use of polyethylene tubing occupies an increasingly important place in the telecommunications, thanks to a number of advantages:

- Corrosion resistance, which allows lower maintenance costs and long service life;
- Flexibility, which allows the pipes to be coiled , fewer joints, easier and faster installation, much less sensitivity to the earth's movement and subsidence;
- Low weight facilitates handling pipes, pipe instalation and reduces transportation costs;
- Broad chemical resistance - good resistance to acids, alkalis and solvents.

## Pipes and fittings of small diameter

Micro tubes are usually made from high density polyethylene (HDPE) with special additives and combinations of materials in mono or multi-layer structure, which give improved system-specific characteristics that are required for a particular application. Micro tubes 12/8, 14/10, 16/12 and 18/14 are designed for direct plowing.
Thin-walled tubes 7 / 5.5 and 10/8 are used for installation inside facilities.

It is recommended that the pipes be stored in dark places or covered with an opaque film. The tubes may not be exposed to the weather or to UV radiation for more than 10 months.



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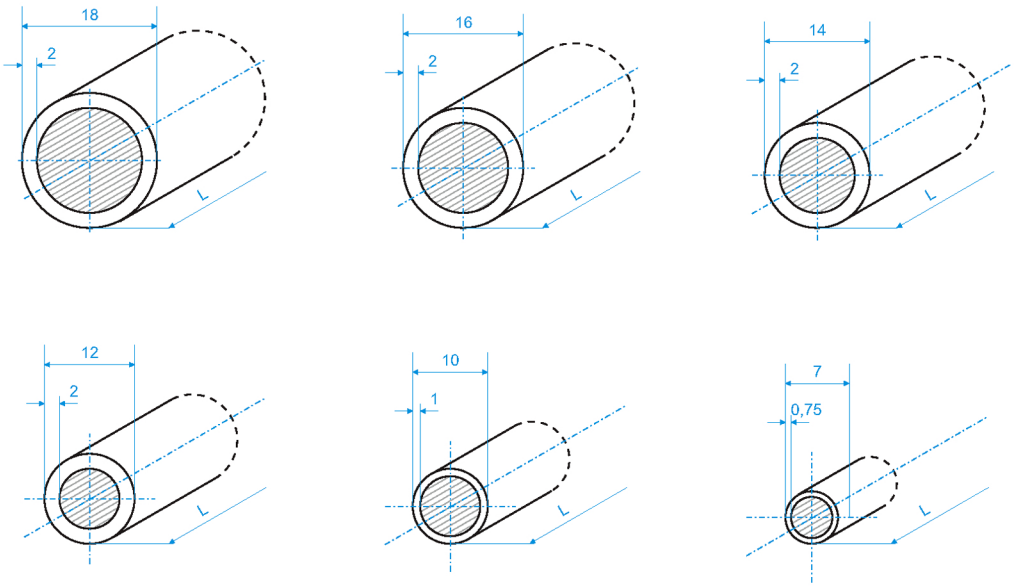
## Production program




When building telecommunications networks and itineraries, in addition to mechanical and chemical resistance the possibility of insufflation of optical fibers over long distances without coupling is also very important. The special shaping of the inner surface of the pipe and inner layer of special sliding materials allow for insufflation with a minimum coefficient of friction, to avoid overloading the cables. The coefficient of friction is measured by "Belcore" test and calculated according to the formula:

$$\mu = \frac{\log (f/Nf)}{\Theta}$$

For joining micro tubes we use appropriate couplings. Couplings are designed by the principle "quick couplers."

The tubes are compatible with the majority of international telecommunications standards.

SIQ
ISO 9001:2008
Q-1926