

GUIDELINES FOR INSTALLATION OF MERIFLEX BURIED PIPING SYSTEMS

1. General

- Careful attention must be paid to the specific requirements in national and local regulations and standards regarding installation.
- The following documents may also be referred to :
 - SI 4427-6 Installation of PE pipes
 - ISO10839 Code of practice for design, handling and installation of PE pipes and fittings for the supply of gaseous fuels

2. Jointing

- Meriflex pipes can be joined using butt-fusion and electro-fusion techniques.
- Before joining, materials shall be inspected and pipes with scratches deeper than 10% of their wall thickness must be discarded.
- Fusion equipment shall meet the requirements of the relevant part of ISO12176.
- Equipment shall be inspected before use. Heating plates, hydraulic hoses, electrical cables and guides must be in good condition.
- Joints shall be made only by trained and qualified personnel.



3. Laying

- The minimum width of the trench shall be greater than the width of the pipe by at least 20cm on each side to accommodate back-fill.
- The minimum depth of cover should be 0.8m and under roads 1.2m.
- Pipes must be supported evenly over their entire length along the bottom of the trench
- Trench bottoms must be free from stones, sharp objects, organic material and other refuse
- In stony areas trenches should be dug 10cm deeper than the required depth and the trench bottom should be filled with a granular material with a particle size of not more than 4.75mm (i.e. sand).
- Pipes shall be laid in trenches that are well drained and dry
- Pipes should be supported outside of the trench with sand bags at least 0.5m from the edge
- Care must be taken not to damage pipes when lowering the pipeline into the trench
- Bending radii shall not exceed 25 times the nominal diameter for SDR11 pipes and 20 times the diameter for pipe with SDR17 or greater.

- Backfilling of trenches should be carried out with a granular material with a particle size of not more than 4.75mm (i.e. sand) to a depth of at least 15cm above the crown of the pipe.
- The material must be spread and compacted around both sides of the pipe and care must be taken not to leave unfilled areas especially underneath the pipe.
- Excavated material may be used for backfill from 15cm above the crown if it is free from stones, sharp objects, organic material and other refuse and can be compacted.
- A warning tape with tracing wires may be placed in the trench approximately 30cm above the pipe.

4. Drag Forces

- Supporting rollers must be used when dragging pipes
- Drag forces should not exceed those calculated according to the following equation:

$$F = \frac{14\pi d_e^2}{3 \times \text{SDR}}$$

F = The drag force in Newtons

d_e = Pipe external diameter in mm

SDR = Standard dimension ratio