

## **XP E 29-826 norm (11/2017) extract for PLT kits installation**

### **8 Use of PLT kits**

#### **8.1 Requirements for producing gas installations using PLT kits**

This subclause relates to the fitness of tubing forming PLT kits, its fabrication (forming and assembly) and the installation of PLT kit components.

A tightness test of the entire installation shall be performed in accordance with the applicable regulatory provisions and technical specifications.

**NOTE** Parts of gas installations remaining under the control of the gas supplier, pursuant to regulatory and contractual provisions, shall furthermore be produced in accordance with his technical requirements.

#### **8.2 Fitness of PLT tubing**

The pliable tubing of the PLT kits is suitable for use in underground, elevated or built-in pipework. Covering without a sheath in concrete is prohibited.

**NOTE** The limit values of the internal diameters of collective pipes according to the pressure liable to be reached in this pipes are governed by regulations.

#### **8.3 Use of PLT kits**

##### **8.3.1 Forming**

The pliable tubing of the PLT kits shall not be worked using heat (flame, hot air or water, etc.). The minimum bend radius of tubing forming the PLT kits shall comply with the recommendations specified by the manufacturer.

##### **8.3.2 Assembly of PLT tubing and accessories**

###### **8.3.2.1 General**

Mechanical or screw-on fittings (or joins) must not be used in encased, covered and built-in runs or in sleeves and false-ceiling ducts.

**NOTE** PLT fittings are only suitable for use in ventilated spaces

###### **8.3.2.2 Assembly of PLT pliable tubing of the same type**

The pliable tubing of the PLT kits shall be assembled with PLT fittings and assembly procedures specific to each manufacturer. The pliable tubing or components of PLT kits shall not be assembled by welding. Unless specified otherwise, the PLT fittings to be assembled with the PLT kits are not compatible between the different systems and may not be assembled with other types of PLT pliable tubing.

### **8.3.2.3 Assembly of components of different types**

Changes of the tube or tubing type also apply obligatorily to accessories.

NOTE 1 PLT insulating fittings are used if dielectric insulation is needed and in the event of the use of materials of different types on underground pipework.

NOTE 2 Mechanical fittings are only suitable for use in ventilated spaces.

Junctions are made with the exclusive PLT fittings from each PLT kit manufacturer. Direct connections are prohibited.

Welding, braze welding and brazing operations performed on a transition PLT fitting between a rigid tube and PLT pliable tubing are performed in accordance with the applicable regulatory provisions and technical specifications.

Constituent tubing from a PLT kit shall not be welded, braze welded or brazed directly onto a copper, steel or lead tube.

All precautions shall be taken during fabrication to ensure that the tubing is not subject to damage caused by heat or mechanical causes (cutting of the coating) during fabrication. If the protective coating of the tubing forming the PLT pipework is damaged, it shall be replaced in its entirety over the full length of its damage according to the provisions specified by the manufacturer.

## **8.4 PLT kit installation procedure**

### **8.4.1 Check prior to installation**

The void in the tubing shall be checked prior to any use.

### **8.4.2 Underground PLT kit installation**

Installation shall comply with the regulations for fabrication specified in NF DTU 61.1 – Part 2. Underground PLT kits shall be placed in sleeves. Mechanical fittings or joints must not be used along underground section runs.

In addition to the requirements stipulated in NF DTU 61.1 P2, subclause 5.3.2.1.1, runs under slabs are authorized.

For indoor installations servicing an individual residence, running below the residence is authorized, provided that the following two requirements have been met:

- installation is performed with a continuous tubing length of PLT kits;
- all necessary precautions are taken to prevent the risk of shearing.

If the protective coating of the pliable tubing of the PLT kits is removed or damaged when using the tubing, it shall be fully restored along the entire bare length. This may be carried out for example using adhesive strips or heat-shrinkable sleeves. In the event of the baring of the tubing during PLT fitting assembly, the protective strip to be restored shall cover at least the end of the PLT fitting in contact with the tubing.

NOTE Adhesive strips or impregnated strips according to the standards XP P 41-303 or XP P 41-304 are suitable for anti-corrosion protection.

### **8.4.3 Elevated PLT kit installation**

Installations are subject to the layout proscriptions and restrictions specified in NF DTU 61.1 – Part 2.

If the protective coating of the pliable tubing of the PLT kits is removed or damaged when using the tubing, it shall be fully restored along the entire bare length. This may be carried out for example using adhesive strips or heat-shrinkable sleeves.

In the event of the baring of the tubing during PLT fitting assembly, the protective strip to be restored shall cover the end of the PLT fitting in contact with the tubing.

NOTE Adhesive strips or impregnated strips according to the standards XP P 41-303 or XP P 41-304 are suitable for anti-corrosion protection.

PLT kit supports are made either from collars, or from specific supports for the PLT kits (e.g. in an electric type conduit). The maximum distance between the supports is 1,5 m on horizontal sections and 3 m on vertical sections. The support diameters shall be adapted to the external tubing diameters.

### **8.4.4 PLT kits incorporated into building elements (walls, partitions or floors)**

Installation shall comply with the regulations for fabrication specified in NF DTU 61.1 – Part 2.

PLT kits in sleeves may be incorporated in concretes or mortars.

## **8.5 Disuse of existing pipework**

All abandoned gas pipework left in place shall be disconnected, bled and sealed at both ends. Sealing merely by pinching abandoned pipework is, in this case, not permitted, the PLT plugging fittings recommended by the PLT kit manufacturer and specified in his instructions should be used. The gas feed pipe, whether remaining supplied with gas or not, previously supplying the abandoned pipework shall be sealed with a suitable device.

The suitable device may be:

- the use of a screw-on cap mounted on a valve;
- the use of a cap assembled in a specific manner on a PLT kit.

NOTE In the case of an individual unused connection, double-sealing shall always be performed on the latter (cut-off device and plugging device described above).

## **8.6 Protective devices and marking of PLT kits**

### **8.6.1 Sleeves**

The sleeves consist of rigid or flexible metal tubes, rigid or flexible plastic sleeves or concrete, stoneware or fibrocement hoses or tubing.

### **8.6.2 Mesh or warning device**

Meshes or warning devices shall comply with the standard NF T 54-080 and be yellow.

NOTE They may be made of polyethylene, PVC-coated wire, etc.

### **8.6.3 Marking**

Where mandatory, elevated pipes shall be marked in accordance with the standard NF X 08-100.

## **8.7 Miscellaneous provisions**

### **8.7.1 Equipotential bonding**

PLT kits situated inside buildings, as well as those situated outdoors and forming an integral part of the building, shall be connected to the main equipotential bonding (see the standard NF C 15-100). Where the pipe enters the building, the equipotential bonding shall be performed downstream from the PLT insulating fitting, if applicable.

NOTE The pipe external to the building corresponds to a pipe situated at the building frontage, e.g. a terrace-mounted boiler room or mini-boiler room pipe.

### **8.7.2 Earthing**

Gas pipework shall not be used for earthing purposes.

### **8.7.3 Specific mechanical loads**

Gas pipes made of pliable tubing shall not be made to withstand mechanical loads for which they are not intended. A fixing collar shall be fitted in the immediate vicinity (not more than 100 mm in each direction) of any gas meter in the service duct if the meter does not have its own fixing device.