

# Qual-PEX Plumbing & Heating Pipe

## FOREWORD.

Following recent incidences which have come to our attention from the market place relating to pipe failures we wish to once again emphasise the distinction between the different classifications of PEX pipe and their suitability for the UK market.

The foreword below from the BSI in the UK is also relevant to the Irish market.

*“The increase in unvented hot water storage systems in the UK, and the higher temperatures and pressures associated with these, lead to potential health and safety concerns. These are addressed by the **EXCLUSIVE use of the BS 7291 Class “S” pipes for the full range of service conditions**”.*

These service conditions specify a system malfunction temperature for sealed central heating systems and indirect hot water primary circuits of 114°C.

Only pipes certified to BS 7291 Class “S” meet these requirements.

Pipes certified to BS EN 15875 are NOT suitable for such systems.

These pipes are only suitable for a system malfunction temperature of 100°C.

The following note from the BS EN 15875 standard clearly highlights this:

*“Please note: This standard **does not apply** if base values for  $T_{mal}$  (system malfunction temperature) are higher than 100°C.”*

As such any non BS 7291 Class “S” pipe being installed in such systems may not be covered by insurance should any failure occur, resulting in legal and financial exposure for the plumbing installer.

# Qual-PEX Plumbing & Heating Pipe

Qual-PEX - the flexible tan\white coloured crosslinked polyethylene plumbing pipe.

Qual-PEX has been developed, tested and approved for hot and cold water services, central and underfloor heating systems.

Qual-PEX is designed to suit BS 7291 Pushfit and standard Brass Compression Fittings and Manifolds.

Qual-PEX is available in the following sizes in both lengths & coils.

Metric Sizes:- 10mm, 12mm, 15mm, 22mm, and 28mm

Irish Sizes:- 1/2" (14.7mm), 3/4" (21.0mm) and 1" (27.4mm).

Qual-PEX is available with and without an EVOH Barrier Layer. Barrier complies with DIN 4726.

Qual-PEX is rigid enough to minimise sag with pipe runs looking neat, tidy and professional.

Qual-PEX is flexible enough to be cabled through awkwardly placed holes under flooring and threaded behind partition walls and through ducts.

Qual-PEX enables the installer to undertake faster, easier and more cost-effective installation. Independent tests show installation time savings of up to 40% compared with traditional plumbing materials.

Qual-PEX metric size pipe is BSI Kitemark approved for use under the service conditions listed in BS 7291: Parts 1 and 3 Class S:-

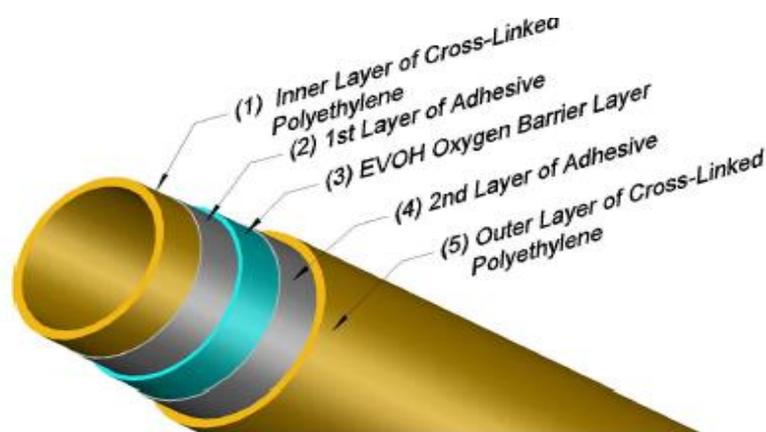
12 Bar at 20°C - 4 Bar at 82°C - 3 Bar at 92°C  
and short term overload temperatures up to 114°C.

Qual-PEX is also approved for use by:-

IAB (Irish Agreement Board) • WRAS (Water Regulations Advisory Scheme).

Qual-PEX barrier pipe incorporates an EVOH oxygen diffusion barrier layer sandwiched within the wall of the pipe, which protects the layer from physical and UV damage. The EVOH layer renders the pipe virtually impervious to gases.

Qual-PEX barrier pipe improves the performance of sealed central heating systems by reducing the risk of pressure drops caused by a vaporisation of water and corrosion which can occur in a boiler's heat exchanger.



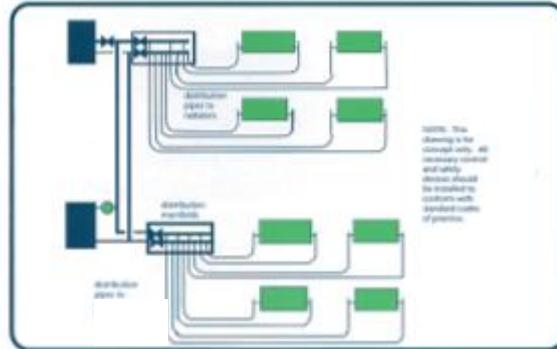
Qual-PEX Barrier Layer Illustration.

# Qual-PEX For 21st Century Heating & Plumbing Systems

## DISIRIBUTION MANIFOLDS

A centrally located, easily accessible manifold acts as the control centre for the heating / plumbing system. Each appliance has its own unbroken supply line to/from the manifold eliminating the need for any inaccessible joints under floors, behind walls etc.

Qual-PEX pipe is perfect for this application with the right degree of flexibility to bend around corners without



using fittings. As each appliance has its own dedicated supply/return line the pipe runs can be made with smaller bore and even more flexible Qual-PEX pipe.

## UNDERFLOOR HEATING SYSTEMS.

Underfloor Heating Systems already heat 50% of all family dwellings in continental Europe.

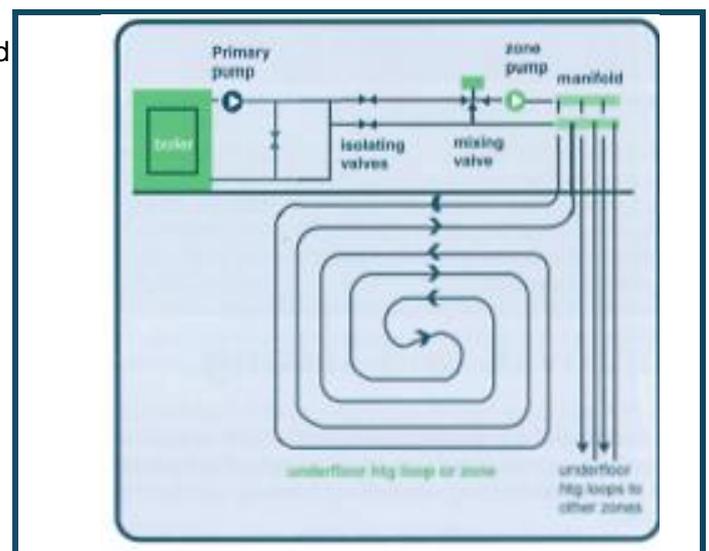
Now it is gaining in popularity and credibility in Western Europe, particularly in purpose built new homes. It is one of the most comfortable, efficient (approx. 12% energy savings) and healthy ways to heat a house. Also, with no radiators, you can achieve increased wall and floor space.

Pipelife Underfloor Heating (UFH) System is one where Qual-PEX coils are laid in the concrete floor or under suspended timber floors and warm water is circulated through these loops. The gentle heat generated rises uniformly through the room. The floor surface temperature does not exceed a comfortable 29°C, in contrast to radiators which reach 80°C. Most floor coverings can be used with UFH. Gas or Oil boilers may be used with this system.

The loops of Qual-PEX start at a valved supply manifold and can be individually controlled manually or thermostatically using thermoelectric actuators.

The Qual-PEX loops then run under the floor before terminating at a return manifold, which is located under the supply manifold, in a central position in the building. Pipelife offer a design and support service to Plumbing Contractors through authorised stockists of Qual-PEX nationwide.

Once you send in the plans of the house, our Engineer designs the system. By using a custom made software package, our engineers can design a full or partial underfloor heating system, customised for any building type.



# Qual-PEX Application Guidelines

## PRODUCT SELECTION AND INSTALLATION

Pipelife Ireland Limited pipe and related products are specifically designed and manufactured by Pipelife Ireland Limited to the Technical Specifications set out in the Pipelife Limited Product Catalogues and on our website ([www.pipelife.ie](http://www.pipelife.ie)).

All Pipelife Ireland Limited pipe and related products should be selected, installed, used and maintained in accordance with these Technical Specifications.

It is the customer's / user's responsibility to ensure that Pipelife Ireland Limited pipe and related products are suitable for their intended applications, are properly installed and maintained and are used in accordance with the Technical Specifications. It is also the customer's / user's responsibility to provide it's own customers with any relevant technical information about Pipelife Ireland Limited products it supplies them.

Qual-PEX is suitable for use in hot and cold water distribution systems, underfloor heating systems and central heating systems that are operated continuously at temperatures up to 92°C at 3 bar pressure. Short-term overload temperatures up to 114°C are permissible. For cold water systems Qual-PEX is suitable for use up to 12 bar pressure. For hot water systems Qual-PEX is suitable for use up to 6 bar pressure.

Qual-PEX (Metric size) can be joined using any standard BS 864 compression fitting or BS 7291 approved push-fit fitting designed for use with 10mm, 12mm, 15mm, 22mm and 28mm pipe.

Qual-PEX is a semi-rigid pipe that can be used as a direct replacement for copper in many applications. Although semi-rigid, it can be bent readily without tools.

Qual-PEX's toughness and flexibility at low temperatures allows the pipe to be used with little risk of bursting where frost damage might otherwise occur.

## Specification

### Material

Qual-PEX is a cross-linked high-density polyethylene.

'Cross-linking' is a widely employed method of forging permanent links between polymer chains to form an interwoven three dimensional lattice within the pipe wall. This greatly reduces the ability of the polymer to 'creep' with time and allows the burst resistance of Qual-PEX to be maintained almost indefinitely at high temperatures. The cross-linking process is irreversible and is not lessened by continuous exposure to hot water.

<b>Dimensions</b>	<b>10mm</b>	<b>12mm</b>	<b>15mm</b>	<b>22mm</b>	<b>28mm</b>
Outside diameter (mm)	10±0.1	12±0.1	15±0.1	22±0.1	28±0.1
Wall thickness (mm)	1.5-1.8	1.5-1.8	1.5-1.8	2.00-2.30	2.60-2.90
Weight / 100 (meters)	4.14kg	5.12kg	6.9kg	12.9kg	20.4kg
Standard lengths			3m&6m	3m&6m	3m&6m
Standard coils (meters)	50/100	50/100	25/50/100	25/50/100	25/50

<b>Irish Dimensions</b>	<b>½"</b>	<b>¾"</b>	<b>1"</b>
Outside diameter (mm)	14.63 -14.74	20.98 - 21.09	27.33 - 27.44
Wall thickness (mm)	1.6-1.8	2.05-2.25	2.60-2.80
Weight / 100 (meters)	6.7kg	12.3kg	20.0kg
Standard lengths	3m&6m	3m&6m	3m&6m
Standard coils (meters)	100m	50m	50m

## Mechanical Properties of Qual-PEX:

Tensile Strength (at break):	20Mpa at 50 mm/min.
Elongation at break (minimum)	150%
Impact strength (notched izod)	900j/m notch
Co-efficient of linear expansion (20°C)	1.5 x 10 <sup>-4</sup> m/°C
Co-efficient of linear expansion (82°C)	2.8 x 10 <sup>-4</sup> m/°C

## Approvals and Testing

Qual-PEX has been tested according to the German Standard DIN 16892 and the British Standard BS 7291, which are the most stringent European standards for cross-linked polyethylene pipe used for central-heating, underfloor heating and hot/cold water systems.

- **Qual-PEX pipe fully meets the requirements of DIN 16892.**
- **Qual-PEX is WRAS (Water Regulations Advisory Scheme) approved.**
- **Qual-PEX (metric size) is BSI kitemark approved to BS7291 Class S.**
- **Qual-PEX is approved by the Irish Agreement Board.**

## Quality Control Testing

Qual-PEX is manufactured in an ISO 9001 approved facility. Qual-PEX pipe is sampled frequently during normal production and subjected to rigorous tests to establish that it meets specifications for mechanical strength at elevated temperatures and pressures, and resistance to long-term degradation.

## Qual-PEX Installation Guidelines

### Cutting

To ensure successful jointing, pipe ends should be cut smoothly and squarely with purpose-made pipe cutters.

### Jointing

All cut ends of Qual-PEX require internal support inserts to be fitted before insertion into a fitting. This insert is designed by Pipelife within very fine tolerances to give a perfect fit and to have very high strength.

Qual-PEX is manufactured to the same nominal dimensions as copper tube and can be used with any standard compression fitting according to the instructions on page 8. In addition 'push fit' fittings such as Qual-FIT and Tectite fittings which are designed for use with 1/2", 3/4", 1", 10mm, 12mm, 15mm, 22mm and 28mm pipe may also be used according to the manufacturer's instructions, and the guidelines on page 8.

### Bending

For sharp bends standard elbow fittings should be used. Where slower 90° bends are required in 15mm or 1/2" Qual-PEX it is often quicker, neater and cheaper to use a standard 15mm x 90° angle bracket/cold forming bend.

Gentle bends may be made by the use of pipe clips on either side of the bend, positioned to maintain the bend radius.

The use of bending springs and skilled manipulation is not required. The pipe should **not be** heated with a blow-lamp or hot-air gun.

### Minimum bend radi are as follows:

10mm Qual PEX	45 mm using pipe clips
12mm Qual PEX	60 mm using pipe clips
15mm (1/2" Irish Size) Qual PEX	100 mm using pipe clips
22mm (3/4" Irish Size) Qual PEX	175 mm using pipe clips
28mm (1" Irish Size) Qual PEX	300 mm using pipe clips

## Expansion and Contraction

Compared with steel or copper, Qual-PEX has a high coefficient of expansion and precautions should be taken to compensate for this. The coefficient of expansion for Qual-PEX increases from about  $1.5 \times 10^{-4} \text{m}/^\circ\text{C}$  at  $20^\circ\text{C}$  to approximately  $2.8 \times 10^{-4} \text{m}/^\circ\text{C}$  at  $82^\circ\text{C}$ .

**N.B.** Allow for 1% expansion on the length when pipe is installed at  $20^\circ\text{C}$  for use up to  $82^\circ\text{C}$ .

Where Qual-PEX is to be surface mounted and used in visible situations for either hot-water supply or central-heating pipework, long straight runs should be avoided since some distortion may occur. Where this is not practicable, pipework should be boxed.

Care should be taken at all times to ensure that pipework is laid out to allow for expansion and contraction. Where appropriate, expansion loops may be employed.

## Clipping

Pipe clips and trunking systems designed for use with copper tube may also be used with Qual-PEX. Clips should be positioned adjacent to fittings wherever possible, making due allowance for expansion and contraction of the pipework. Where Qual-PEX is to be surface mounted and visible, the following clipping distances are recommended:

Average Service Temperature			
10mm, 12mm, 15mm & ½" (Irish) Qual-PEX	20°C	60°C	80°C
- horizontal	500mm	400mm	300mm
- vertical	800mm	600mm	500mm
22mm & ¾" (Irish) Qual-PEX			
- horizontal	800mm	600mm	500mm
- vertical	1200mm	1000mm	800mm
28mm & 1" (Irish) Qual-PEX			
- horizontal	800mm	600mm	500mm
- vertical	1200mm	1000mm	800mm

Where Qual-PEX is to be boxed in or installed under floors or in loft spaces etc, clipping distances can be increased, or the clips omitted altogether if the pipe is adequately supported by other means. Even if Qual-PEX dips slightly between the joints, the speed of water created by the pump is sufficient to move any bubbles of air that may be present in the system. Pump speeds of 1.5m/s may be used with Qual-PEX without causing undue noise.

## Ducting and Insulation

Qual-PEX is a tough material that needs no greater protection from accidental damage when installed than copper. As with copper, Qual-PEX pipe should be sleeved when passing through walls and protected from nails etc, when placed under floorboards or buried under plaster. Note that some local authorities advise that all pipework in screeded floors should be run in ducting to facilitate easy extraction in case of accidental damage e.g. puncturing with a nail.

Under intermediate floors lagging is not required on Qual-PEX pipe, but insulation should be used where Qual-PEX is run in unheated spaces, for frost protection and energy conservation. It should be noted that heat losses from Qual-PEX are less than those of rigid pipes, and Qual-PEX is resistant to bursting, down to  $-20^\circ\text{C}$ . Although concrete has no adverse effect on Qual-PEX, and it may be buried directly in concrete (subject to bye-laws), in order to avoid heat losses it is advisable to thermally insulate the pipe in ground floors.

## Surface temperatures

Due to its low thermal conductivity, Qual-PEX has a much lower surface temperature than copper pipe. As a guide, the following formula can be used to estimate surface temperatures:

$$\text{Surface temperature } T^\circ\text{C} = 0.75 \times (T_i - T_a) + T_a.$$

Where  $T_i$  = flow temperature in the pipe ( $^\circ\text{C}$ ).

$T_a$  = ambient temperature ( $^\circ\text{C}$ )

## **Boiler and Cylinder Connections General Requirements**

Care should be taken to ensure that all boiler installations have the necessary control and safety devices to ensure that the operating conditions laid down in BS 7291: Parts 1 & 3 are not exceeded. The heating system must be installed to meet the requirements of BS 5955. The boiler shall be commissioned in accordance with manufacturer's instructions and the relevant standards BS 6798 and BS 8303.

All pipework between the boiler and the safety valve should be installed using copper tube. Where zone controls or thermostatic radiator valves which may cause a reduction in water flow rates through the boiler are installed, a permanent by-pass should be installed between the main flow and return pipework. Installers should ensure that the system is properly filled and vented during the commissioning stage before the boiler is operated.

Note: Pipelife recommends that the balancing valve for the hot water circuit be a brass lockshield gate valve (conforming to BSS 154/B).

## **Specific Requirements**

### **Low water content boilers with cast iron heat exchangers.**

A minimum of 1 metre of copper tube is required between the boiler connections and Qual-PEX. Furthermore a permanent by-pass must be fitted directly after the pump between the main flow and return pipes to allow the pump to dissipate residual heat from the boiler under all circumstances.

### **Lightweight system boilers with copper heat exchangers.**

Qual-PEX may be connected directly to the boiler connections provided that (a) the boiler incorporates a high limit stat, (b) the connections are outside the casing, and (c) these connections are more than 350mm from the heat exchanger. Note that all three requirements must be met.

### **All Heat Emitting Appliances.**

A minimum of 1 metre of copper tube is required between the appliance connections and Qual-PEX. All appliances should incorporate a high limit stat to protect pipework in the event of boiler malfunction.

### **Solid Fuel Boilers**

The gravity circuit on a solid fuel heating system should always be installed using copper tube. Qual-PEX may be used on the secondary (pumped) side of a solid fuel heating system, provided that the nearest connection to the boiler is at least one metre away from the boiler and outside the fireplace.

### **Pressure Testing**

Pressure test the system for at least 1 hour using the conditions for pressure testing listed in BS 5955.

1. For sections of the system, which can be subjected to full mains pressure, apply a minimum test pressure of the available mains water pressure.
2. For sections of the system downstream of a pressure control valve, apply a test pressure equal to the pressure control valve setting.
3. For heating systems apply a test pressure equal to the pressure relief valve setting.

### **Gas pipe**

Qual-PEX should NEVER be used to carry gas.

### **Electrical connections**

Since it is extruded from a plastic material, Qual-PEX is an insulator and is not suitable for earthing electrical appliances.

### **Guidelines for Earthing Plastic Pipe**

Supplementary bonding is not required to metal parts supplied by plastic pipes such as metal hot and cold water taps supplied from plastic pipes. A metal bath not connected to extraneous-conductive-parts (such as structural steelwork) with plastic hot and cold water pipes and plastic waste pipes does not require supplementary bonding. Supplementary bonding in a bathroom or shower room will still be required between simultaneously accessible exposed-conductive-parts of equipment such as between metal appliances e.g. heaters, showers and accessible luminaires.

## **CIRCULATING MAIN INSTALLATIONS**

A continuously operated re-circulating system is a water replenished circulating system which is maintained at a constant high temperature to provide a constant source of hot water. Continuously operated re-circulating systems are used to distribute constant hot water to draw off points that may be distant from the source or hot water storage vessel. Continuously operated recirculating systems are very different from conventional hot water supply and central heating systems found in domestic properties, for which our products have been tested to, under BS7291 Class S approval standard, and for this reason Qual-PEX products must not be used on any continuously operated re-circulating systems as they are not approved under the current version of this standards.

### **Handling and Storage**

To maintain Qual-PEX pipe in the best possible condition for use it may be stored either horizontally or vertically but should be out of direct sunlight. Qual-PEX is stabilised to withstand limited exposure to ultra violet radiation or sunlight, but is not designed for permanent direct exposure. Under such conditions, painting or lagging is required. The pipe should be supported throughout its length to avoid sagging. The pipe should be similarly supported in transit and protected from abrasion and crushing.

### **Corrosion inhibitors / Prevention**

To prevent sludging & corrosion in the heating system, the following appropriate measures should be taken.

Inhibitors: Pipelife fully approves the use of corrosion inhibitors with Qual-PEX Barrier Pipe: Qual-PEX Barrier Pipe dramatically reduces the ingress of oxygen into the heating system thus reducing the possibility of corrosion of ferrous parts in the heating system.

### **Hard/Soft Water Areas**

In hard water areas, the smooth bore and flexibility of Qual-PEX prevents lime scale from adhering to the inner surface of the pipe, therefore

Qual-PEX is the ideal pipe to use where water is of a temporary hard nature.

Unlike rigid metal pipes, Qual-PEX is not dissolved or corroded by soft acidic waters.

### **INSERTS:**

Qual-PEX inserts are BS 7291 system approved inserts suitable for use with any BS 7291 approved pushfit fittings and standard compression fittings. It is preferable that Pipelife inserts would be used with Pipelife Qual-PEX. However, an alternate BS7291 approved insert may be used. In addition, Pipelife Ireland will not accept any responsibility or liability for any product or consequential damage caused due to a joint failure when a non BS7291 insert is used on a BS 7291 pushfit fitting or standard compression fitting.

# Qual-PEX Jointing Guidelines

## Using approved compression fittings:

1. Cut the Qual-PEX pipe squarely. Pipelife recommends the use of a pipe cutter, specifically designed for plastic pipes.
2. Push the Qual-PEX support insert into the pipe - it will assist in re-rounding the pipe after the cutting action. This insert will support the pipe in the joint.
3. Follow one of the following methods:-
  - (a) Push the Qual-PEX pipe into the compression fitting without removing the capnut and compression ring until it makes firm contact with the pipe stop in the body of the fitting.
  - (b) Remove the capnut and ring from the fitting, place on Qual-PEX pipe in logical order and insert the pipe fully into the fitting.
4. In both cases, tighten the capnut by hand as far as possible and then a further 1.5 turns with a spanner / pipe wrench.

Note: A compression joint makes a two point seal which normally eliminates the need for jointing compounds, and sealants. Should it be deemed desirable, an approved jointing compound may be used sparingly at the joint in order to reduce the load required to reach the number of turns. Joints should be wiped clean after completion.

## Using pushfit fittings

Although Pushfit Fittings are simple to assemble, it is important to take care while making the joint, to avoid leakages afterwards. Standard good practice according to the following procedure will ensure a trouble free installation.

1. Cut Qual-PEX with the correct pipe cutters. Ensure that the pipe is cut straight, and is fully clean and free from grit and swarf.  
Note: Any labels on the Qual-PEX pipe should be fully removed before inserting the pipe into the pushfit fitting.
2. Insert the correct Qual-PEX pipe support sleeve (or another BS:7291 approved insert) into the pipe ensuring it is fully home.
3. Clearly mark the relevant socket depth on the pipe, with a pencil or felt marker.
4. Insert Qual-PEX pipe through the release collar to rest against the grip ring. Push the Qual-PEX pipe firmly home until it reaches the pipe stop with a positive "click", then twist the pipe or fitting to ensure the sealing ring has not been displaced.
5. Check the fitting has reached the mark.
6. Pull the Qual-PEX pipe to ensure that the fitting is secure.

Because a pushfit fitting relies on a 'rubber ring seal' to form a watertight seal, it is extremely important that the fitting and pipe is kept free from dirt and debris before and during installation. Furthermore, the pipe should be checked around the area of the joint prior to assembly, to make sure it has not been damaged.

When a pushfit fitting is de-mounted from Qual-PEX pipe, the pipe should be cut back to behind the location of the fitting, in case the pipe has been scored during the demounting process.

# Qual-PEX Pipe Guarantee Certificate

Qual-PEX barrier pipe is manufactured to the Class S requirements of BS7291, the approved service conditions of which are as follows:

- 12 Bar at 20°C
- 4 Bar at 82°C
- 3 Bar at 92°C

Qual-PEX pipe work is guaranteed for a period of:

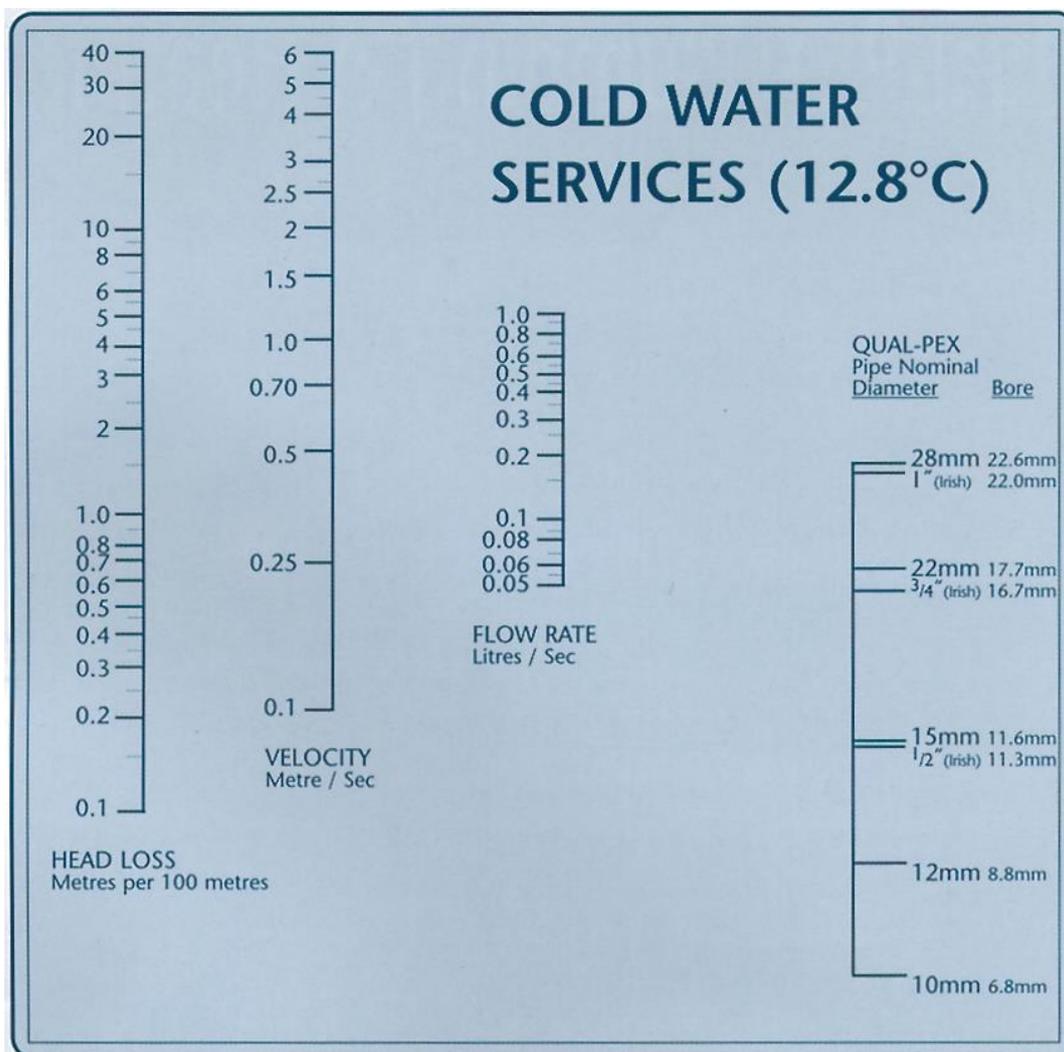
**50 years.**

Provided Qual-PEX installation guidelines are adhered to, the pipe is guaranteed against any manufacturing defects for a period of **50 years**.

## Qual-PEX Pipe Sizing Guidelines

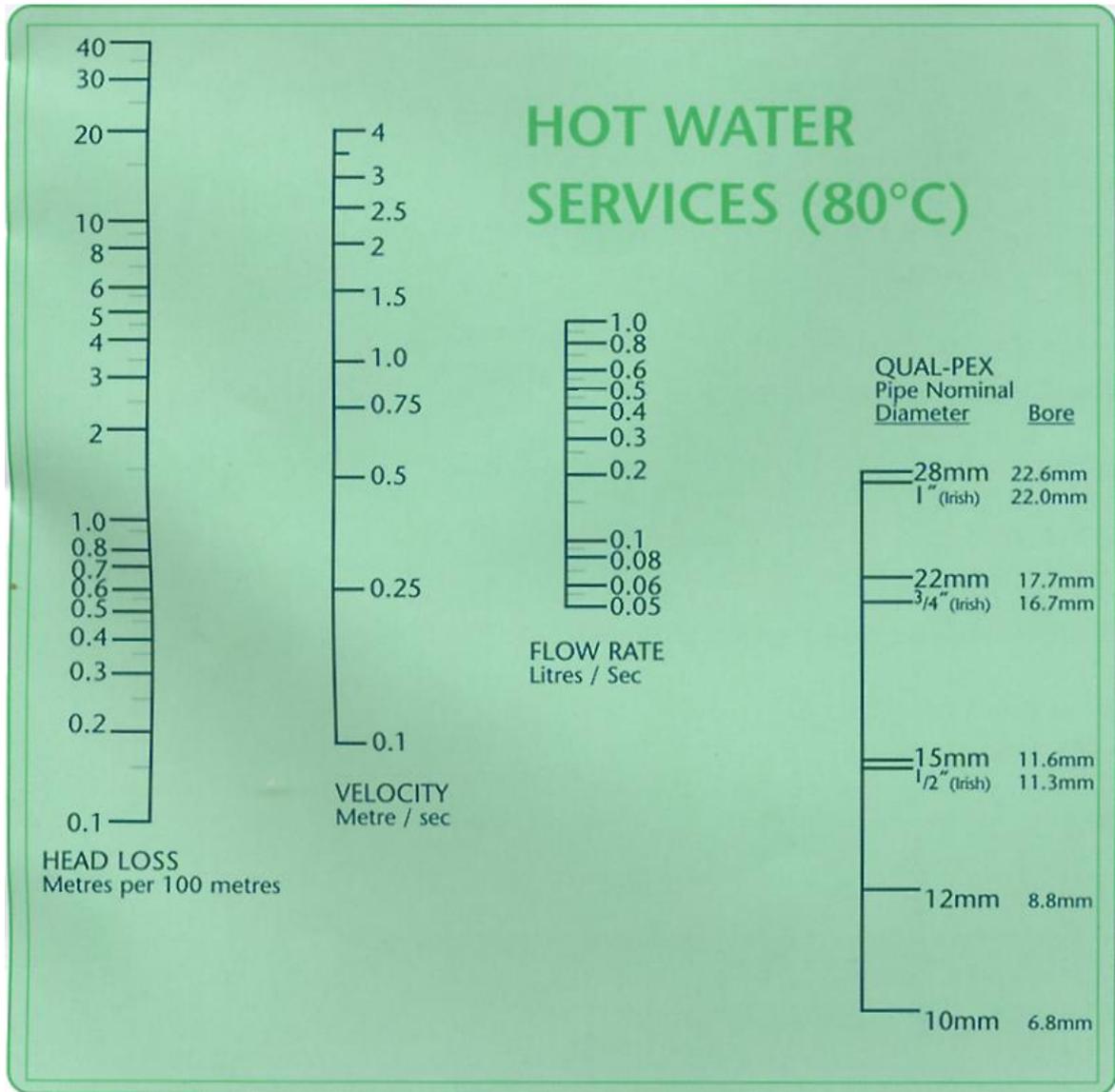
### Cold Water Services

- 1 Start by assuming a particular diameter of Qual-PEX pipe.
- 2 Draw a straight line from the assumed pipe size through the design flow rate required.
- 3 Continue this line across the Velocity and Head Loss scale.
- 4 Check that the head loss does not exceed the permissible loss of head per 100m=  
**Available head x 100 Effective pipe length.**
- 5 Ensure that the flow velocity is not too high i.e. maintain flow velocity below 3m/s.
- 6 If the checks in 4 and 5 are not valid for the pipe size chosen, then choose the next largest diameter of Qual-PEX and repeat steps 1 through 5.



## Hot Water Services (80°C)

1. To determine the flow rate that will result from the selected pipe draw a line from the pipe size selected to the permissible loss of head on the left hand Head Loss Axis (see step 4 in Pipe Sizing Method on previous page for calculation). The flow rate is where this line cuts the Flow Rate Axis.
2. To determine the residual head available in that pipe join the pipe size chosen to the flow rate required using a straight line and continue the line through to the Head Loss Axis. The difference between the permissible loss of head and this mark is the residual head in metres per 100 metres.



## SOME OF THE QUESTIONS MOST OFTEN ASKED ABOUT QUAL-PEX

Q: Is Qual-PEX approved for drinking water?

A: Yes. Qual-PEX is specifically tested and approved to carry drinking water by WRAS.

Q: Can Qual-PEX be buried in concrete?

A: Yes. Concrete does not have an adverse effect on Qual-PEX and the pipe may be buried directly in concrete (subject to bye-laws). However, in order to avoid heat loss, it is advisable to thermally insulate the pipe.

Q: Does Qual-PEX require lagging under floors?

A: Lagging is not required under intermediate floors, but should be used where Qual-PEX is run under ground floors or in unheated spaces, for frost protection and energy conservation. Heat loss is less from Qual-PEX than from rigid pipes, and Qual-PEX is resistant to bursting down to -20°C.

Q: Does Qual-PEX reduce installation time and cost?

A: Yes. Once the installer gets used to working with Qual-PEX, up to **40%** savings can be made in the labour content.

Q: Can inhibitors be used on Qual-PEX?

A: Yes. Inhibitors are recommended for all heating systems.

Q: What effect does hard water have on Qual-PEX?

A: The smooth bore and flexibility of Qual-PEX prevents lime scale adhering to the inner surface of the pipe.

Q: What effect does soft water have on Qual-PEX?

A: None. Unlike rigid metal pipes, Qual-PEX is not dissolved or corroded by soft acidic water.

Q: Can Qual-PEX be used on solid fuel central heating systems?

A: Qual-PEX can be used on the secondary side of a solid fuel heating system. Qual-PEX should not be used for primary pipework on gravity systems.

Q: Can Qual-PEX be used on sealed central heating systems?

A: Yes, provided the maximum system service temperature is less than 95°C.

Q: Can Qual-PEX be painted?

A: Yes. Qual-PEX can be painted.

Q: Can Qual-PEX be used for gas pipe or for carrying oil?

A: No. Qual-PEX is only guaranteed for use with water

Q: Are Pipelife fittings subject to damage if flux ingress arises from soldered fittings (e.g. demounting & grip-ring/support ring).

A: Yes, no fluxes of any type should come in contact with Pipelife Ireland pipe and fittings. If fluxes are to be used in an environment where our fittings are installed, then extreme care should be taken to ensure that no such contact takes place.

Q: Do Pipelife have any guidance or recommendations with regard to ClO<sub>2</sub> (chlorine dioxide) levels?

A: Yes, Pipelife Ireland pipe and fittings are not suitable for use in systems which have high concentrations of chlorine, e.g. swimming pools. Short term chlorination for disinfection will not have an adverse effect on the system. Sustained exposure to chlorine levels above 0.5ppm should be avoided, however these concentrations do not normally arise in potable water supplies.

Q: Do Pipelife have any guidance or recommendations with regard to the use of trace heating tapes?

A: Trace heating tape has no adverse reaction on Pipelife PB, or PEX, pipe as long as it does not exceed the maximum temperatures as per Pipelife guidelines. Trace heating generally works on very low temperatures, and will be well below the maximum temperatures recommended by Pipelife.

Q: Do Pipelife recommend pressure testing with Air or Water?

A: We do not recommend pressure testing of joints with compressed air, only water for pressure system testing. Water will detect any leaks and is far safer. N.B. In winter, (freezing conditions), due care must be taken to avoid damage to pipes in the event of water freezing in the pipes. This causes catastrophic damage to PEX pipes. Refer to BS EN 806-4