

WELCOME ALONG TO THE FIRST ISSUE OF PEX NEWS FROM THE PEX ASSOCIATION.

The PEX association was formed in 2003, by several European suppliers of cross-linked polyethylene (PE-X), with the aim of fostering the market expansion of PE-X as a replacement for traditional materials.

We are conducting in-depth research, providing regulatory bodies with additional information and technical support, in their attempt to develop harmonised test methods covering specific drinking water aspects.

Furthermore, the association is engaged in research projects around the benefits of PEX systems, in order to stimulate their use. This should also help consumers to choose the best material for plumbing and heating applications

WHAT IS PEX?

PEX is one of the most versatile and cost-effective systems for the transport of water, chemicals and gas under elevated pressure and temperature conditions. PEX can provide significantly improved performance over traditional materials and can successfully challenge metal equivalents for such applications.

OUR MISSION

The PEX association is comprised of material designers, manufacturers and processors whose aim is to promote the advantages, benefits and features of using PEX systems.

Our vision is to be seen as the knowledge base for PEX related issues, providing help, solutions, advice and to play a pivotal role in the future design and development of quality PEX materials.

WHO CAN JOIN?

This non profit organisation is open to all companies that have a key interest in PEX, from raw material suppliers to end users.

Who are the current members?

At the time of going to press our existing members are: AEI Compounds, Dalpex, Degussa, GE Industry - Silicones, Innovene, Micropol, Prandelli, Quality Plastics, Solvay Padanaplast, Silon International and Valsir.

ALL YEAR ON THE PISTE AT CASTLEFORD XSCAPE

INNOVATIVE PRONTO-PEX™ all-plastic barrier pipe lies at the heart of the indoor snow slope in the sensational new £60 million Xscape Leisure Complex, which has just opened in Castleford, West Yorkshire. Enthusiastic skiers, boarders and bladers can now look forward to fun on the piste all year round on the real thing – soft powder snow.

Some 20,000 metres of the five-layer PRONTO-PEX™ pipe, manufactured by Micrex Profiles of Stalybridge, has been laid in long loops over the whole base of the 35-metre wide slope. Each loop connects via individual isolating ballvalves, to large manifold pipes running alongside the entire length of the 175 metres run.

A glycol/water mixture is pumped vigorously through the pipes to freeze and subsequently maintain a six-inch thick block of ice over the surface area of the slope. This keeps the daily covering of fresh, dry snow in tip-top condition for the skiers.

Versatile PRONTO-PEX™ was specified for its hi-tech properties and outstanding

performance by installers Pipe 2000 for Acer Snowmec, the company that holds the patent application for this new ski slope system.

Mike West, technical director at Pipe 2000, reports that the installation ran smoothly and was completed in just six weeks. He explained: "Pipe 2000 were very impressed with PRONTO-PEX™ because of its easy handling and natural flexibility. It was simple to lay and curve, and, upon freezing, PRONTO-PEX pipe performed precisely as predicted."

PRONTO-PEX™ is a super-tough 5 layer pipe produced from Isoplas crosslinkable polyethylene and features a buried internal EVOH barrier that inhibits oxygen permeation and diminishes the risk of corrosion within a system. It offers outstanding resistance to significant temperature changes, increased physical load, UV light exposure and aggressive chemicals. Best of all, it is virtually maintenance-free and has a life expectancy of fifty years.

BSI and SKZ-approved, the PRONTO-PEX pipe is ideal for hot and cold water



Simple but effective: a manifold system of PRONTO-PEX™ pipe loops



The PRONTO-PEX™ pipe has been laid at Xscape and the work is all downhill from here

PRONTO-PEX™ is supplied direct from Micrex or through appointed trade distribution outlets. It's fully compatible with standard compression and push fit fittings and comes in 10, 15, 22 and 28mm diameters (plus half, three-quarter and one-inch Irish sizes too) in off-the-shelf coils of 25 and 50 metre and in 3 and 6 metre straight lengths.

Micrex Profiles manufacturers of PRONTO-PEX are part of The Stamford Group of Companies and have more than four decades of experience in the plastics industry. They're always pleased to help specifiers with technical advice and custom orders.

Take a good look at PRONTO-PEX™ – it could be just the solution you've been searching for. Ring David Openshaw now on 0161 330 6518 for further information and an introductory brochure with technical specification.

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systems and underfloor heating. It's been on the market only since the beginning of this year but has already proved a huge success with specifiers, architects, plumbers and heating engineers.

PEX PIPE GAINING POPULARITY



Washington D.C. The no1 home builder on the Denver (Colo) market, saves his buyers an average of \$800 (670Euros) per home, because of the pipe he chooses for the indoor plumbing system.

Oakwood Homes has been installing cross-linked polyethylene (PEX) pipe for the past five years and this builder has no reason to go back to using copper. Interestingly, the cost savings isn't the biggest reason the company chooses PEX pipe.

"We look at it from a quality standpoint" said Dan Carpenter, director of product development for Oakwood Homes. "It's less money to install and it's a superior plumbing system. For the homeowner its control over every fixture in the house and the ability easily adapt the plumbing when adding fixtures, building additions to the house or finishing the basement.

The advantage to using PEX plumbing lies in how easily the flexibility of the material lends itself to manifold (parallel) systems, which eliminate hidden, interim connections. It also allows reduced overall pipe sizes, increasing water and energy efficiencies.

According to a National Association of Home Builders (NAHB) Research Centre study,

when used with a centrally located demand heater, this type of system can offer 17% to 35% annual hot water energy savings.

The partnership for Advancing Technology in Housing (PATH) a government-industry consortium based in Washington D.C., recently identified 10 emerging products and practices it believes are poised to jump into the mainstream with many new users. PEX pipe plumbing systems is one of the 10.

As printed in a major industry trade publication the PATH report states that PEX is a great choice in areas with "aggressive" water – low pH levels, dissolved carbon dioxide or hydrogen sulphide from decaying plants, all of which can eat away at copper pipe.

Besides indoor applications identified by PATH, pipe industry officials are also pointing to PEX as a long-term solution for cities with drinking water service line issues – cities like Washington D.C. and others that have recently been in the news because of drinking water contamination concerns. Recent reports from Washington D.C. point to outdated and corroding metal pipes as contributing to the areas problem with lead in drinking water.

"PEX pipe provides options that improve system performance, reduce installation time and lower total cost" said Camille Rubelz, P.E. director of engineering for the Plastics Pipe Institute (PPI). "Also, PEX pipe does not corrode like metal pipes, is significantly quieter than other materials and is resistant to freeze damage".

The resistance to corrosion and scaling is what makes PEX a long-term solution for drinking water systems both inside and outside a home or business.

The science behind PEX pipe's smooth interior walls and its chemical properties make it resistant to mineral build-up when used with either hard or soft water. End users enjoy consistent flow and water pressure.

"and PEX is certified by third-party testing agencies such as NSP and CSA to be safe for drinking water applications" Rubeiz added.

"Beside water plumbing systems, PEX can be used for many applications, including radiant floor heating, snow and ice melt, turf conditioning and municipal service lines". Rubeiz said. PEX systems connect to standard valves and fittings, so its easy and convenient to install. And it can cost less than half as much as copper – a significant saving for budget constrained city planners"

Flexible PEX pipe is installed without the use of solders, flames or chemical. In plumbing systems, PEX pipes can be combined with remote manifolds to reduce the amount of pipes and fittings, speed installation, balance pressure throughout the system and deliver hot water quickly to minimise wasted water and energy cost.

PEX pipes and fittings systems must meet the very strict performance requirements of standards such as ASTM F876 and ASTM F877. Consumer confidence and satisfaction is driven by PEX pipes performance, safety and quality control standards – all of which are documented by independent, third party listing agencies.

The Plastic Pipe Institute is the major trade organisation representing all segments of the PE piping industry. Member companies share a common interest in broadening market opportunities that can make effective use of plastic piping.

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"IT'S EASIER AND SAFER WITH PEX!"

Martin Ball is the Managing Director of a small private Plumbing Company in South East England (Kent) and has owned and operated his successful business for the past 2 years.

The company's major interest lies in sub contract plumbing work for many of the major building contractors in SE England. We were recently invited to a site in London, where new luxury apartments were being fitted with PEX pipe. Martin was keen to talk about the many advantages to using PEX (equator from Marley Plumbing and Drainage) pipe, over traditional copper.

These include....

- Theft – Leaving copper pipe on a building site presents security problems. There are no such issues with 'plastic' alternatives.
- PEX can be coiled, requiring less storage space and is much easier to transport to site.
- Savings – No 'hot work' permits need to be issued saving time and money
- Safer – no need for any naked flames.
- Less chance for leaks – 1 long length of pipe and no joints under the floorboards.
- Labour costs are reduced – 1 man can do the work of 2 per day.

Overall the whole process is generally much easier and safer and Martin is a complete convert to using PEX

For more information please contact

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PEX IN PUGLIA

**SERRA DEGLI ALIMINI
TOURIST VILLAGE, OTRANTO**

A few kilometers from Otranto, deep in the heart of delightful wild Mediterranean woodland, this village is one of the best-known complexes of its type in Puglia. It is witness to the perfect balance of a modern tourist structure skilfully integrated into a charming uncontaminated landscape. The structure comprises a central building with 308 rooms and plenty of space for the main facilities.

Mr. Salvatore Basile, Managing Director of the Termo Erre Bi Erre company (RBR), Galatina, tells of the work carried out at the Tourist Village, which involved the entire water supply, Air conditioning and Village Heating system.

HOW DID YOU DISCOVER DALPEX SRL?

Through your area representatives, Messrs Ezio Guarini and Angelo Promutico of the G&P Valenzano Agency, Bari. We discussed the range of products from the Laser Multi Dalpex and Idrosystem lines.

Of course, making a choice wasn't easy, taking on such a large job with such short delivery times, placing my trust in products from a company I didn't know. I had some doubts at the beginning.

Your documentation and the well-known quality of Dalpex products helped me make the right decision. About 7000 metres of Laser Multi Dalpex in various diameters were needed.

We used 63mm diameter tubing for the main trunks and continued with diameters of 40, 32, 26, 20 and 16mm respectively for the branches.

For the fittings we chose the "Press Fitting" line, which guaranteed excellent results and very short installation times.

We started work in the first days of March and handed the site over by the date specified in the contract of the 1st June 2005, in time for the start of the tourist season.

WAS PEX A SUCCESS?

With respect to the various diameters of tubing, I found installation remarkably easy. This impression was entirely shared by the firms collaborating on the village project, in particular the company De Pascalis Impianti srl of Galatina. I would like to quote them for you:

"With reference to the use of the Multi strato tubing needed for the thermohydraulic plant in the Village at Serra degli Alimini, we are happy to say that the system displayed excellent dimensional stability even at high temperatures.

This product also has low resistance to piercing and is easily worked. Undoubtedly all these features are and will be indices of certain success." Ditta De Pascalis srl

FUTURE PROJECTS

Naturally I intend to further strengthen the relationship we started with you. In response to various supply requests, I received the fullest attention as regards product availability and speed of dispatch, and can give you an appointment in October, for the start of a new Tourist Village which will once again be built in this beautiful part of Italy.

HEATING HISTORY

A MAJOR DALPEX INSTALLATION PROJECT DURING THE RENOVATION OF ONE OF THE MOST FAMOUS BUILDINGS IN SPOLETO.

The work consisted of providing radiant underfloor heating in Palazzo Collicola, a sumptuously furnished building of great historic and cultural importance that boasts, besides a large, well-tended garden, some splendid tapestries bequeathed by Cristina of Sweden in the 18th century.

To protect this artistic heritage, the choice necessarily fell on radiant underfloor heating which, in addition to offering comfort to visitors, provides considerable energy savings and a constant room temperature to preserve over time, the condition of the works in the Palazzo.

The planning of the installation was the result of continuous and considered collaboration between the technicians in charge of the site and the Dalpex Technical Office, who dealt mainly with questions such as the depth of the units (a factor that often came up during the project) and the disconnected nature of the floor due to the presence of cement string courses crossing the rooms.

Traditional installations call for depths of 8 to 10 centimetres, but in some places the particular structure of the floor in Palazzo Collicola left no more than two or three centimetres. Vaulted ceilings divided the floors of the upper storeys and made them uneven.

As the solution, Dalpex chose SISTEMA BARRA (the Bar System), the product best suited to structures of this type, featuring smooth polystyrene insulation panels in different thicknesses (1,2 or 3 cm), a polythene vapour barrier and modular bars for fixing the tube (pex 17 x 2) by means of suitable clips.

This system made it possible to recreate a perfectly even floor by placing insulating panels of suitable thickness and covering the projecting areas with a thin layer of river sand. Together with the vapour barrier, this resulted in a "floating layer" (not attached to the fixed parts of the structure).

The project was carried out by Gianni Riberto, an installer from Este (PD) who is highly skilled in the installation of heated flooring and is much taken with Dalpex products.

“ I think that with disconnected floors like this, the BAR system is the most efficient way of installing a radiant system..” says Riberto “ because the panels can be shaped quickly and efficiently and, thanks to the bars, circuits can be designed to meet with the different requirements encountered on site. In this particular installation, some of the circuits had to be laid out so as to avoid the areas occupied by the vaulted ceilings of the lower levels. ”



THE FUTURE OF WATER SYSTEMS

When Uponor Wirsbo made its revolutionary breakthrough in PEX tubing more than 30 years ago, it formed a foundation that will benefit builders for decades to come. The advantages offered by Uponor PEX have made Uponor Wirsbo the world's leading provider of non-metal plumbing systems to the residential housing industry. In comparison to traditional copper systems, Uponor PEX offers a new era of advantages: tube flexibility reduces the number of fittings needed; freeze resistance is proven down to 95° below zero Fahrenheit; tubing is guaranteed against leaks for 25 years; and connection systems require no sweating, gluing or crimping.

Also, when polybutylene tubing was pulled from the market and removed from homes in an unprecedented class action lawsuit, the industry could rely upon Uponor PEX as an easy-to-install solution offering proven quality that homeowners can trust.

“Builders realize the advantages of our water systems, and we’ve also been very well received by homeowners,” says Steve Lockridge, Division Manager of Uponor Manufactured Structures. The Manufactured Structures division specializes in serving the systems-built housing industry. Uponor is one of the leading PEX providers for panelized and modular housing, mirroring the company's leading position in the site-built housing industry.

“We (Uponor) completed the first real 30-year continuous test in the history of domestic hot water applications,” Lockridge says. Tubing was observed from Nov. 15, 1973 to June 29, 2003, under accelerated conditions of 145 p.s.i. and 200° Fahrenheit. “We’re a company that strives to constantly lead, and never rests on its laurels,” Lockridge says. “Uponor feels a great responsibility about service to the industry.”

As pointed out by Uponor Technical Director Tim Peick, “In the past few years, the industry has gained much more awareness and product knowledge about water systems. The industry has developed a consensus standard regarding PEX chlorine resistance that greatly benefits everyone - systems builders, suppliers and home owners.”

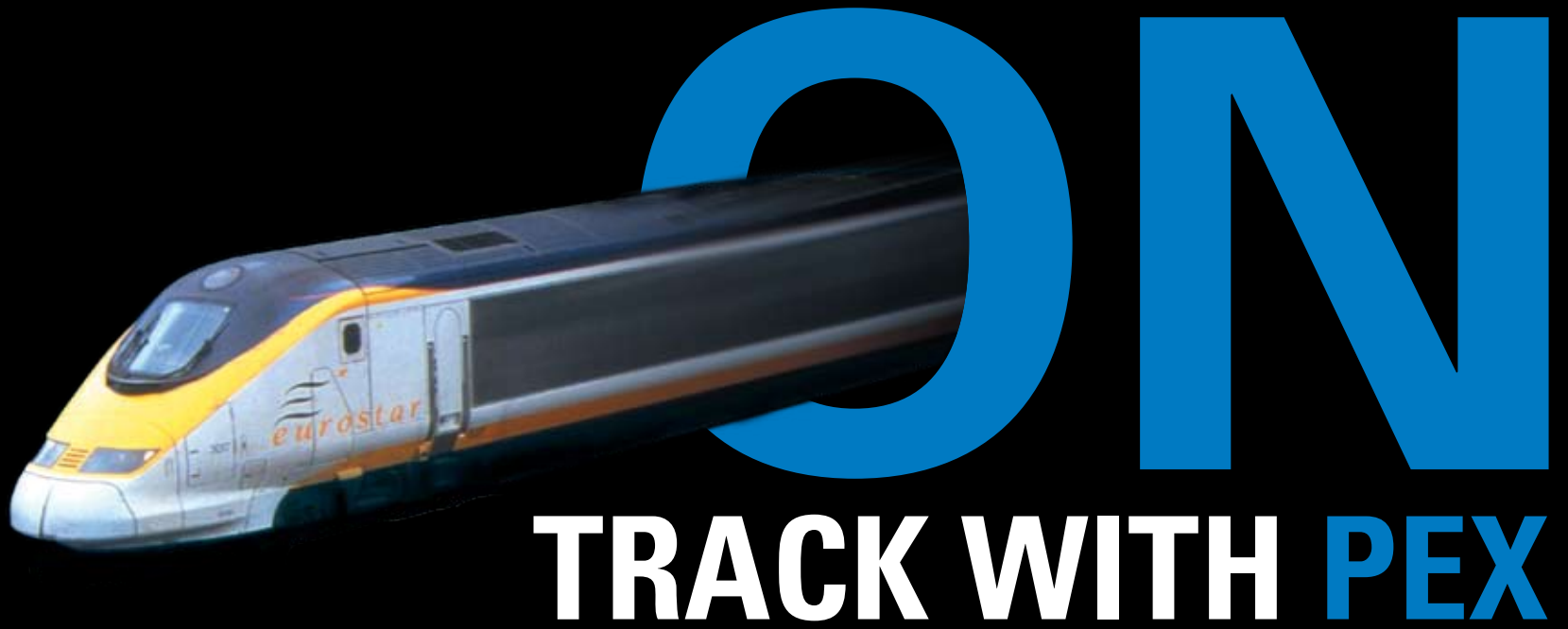
The consensus standard is ASTM F2023 “Standard Test Method for Evaluating the Oxidative Resistance of CrossLinked Polyethylene (PEX) Tubing and Systems to Chlorinated Hot Water.” The standard was developed in 2000 to the approval of builders, water systems manufacturers and industry leaders. “Nonmetal plumbing will grow continually in usage far into the future, and ASTM F2023 is a standard unlike any other in the past,” Peick says. “Meeting the standard assures you’re providing a water system that is resistant to the chlorine present in water.” Uponor PEX I also meets standards of the International Plumbing Code (IPC), Uniform Plumbing Code (UPC) and International Residential Code (IRC).

The Plastic Pipe Institute (PPI) completed document TN31/2004, entitled “Differences Between PEX and Polybutylene Piping Systems for Potable Water Applications,” to provide an overview of the significant advantages offered by PEX water systems.

As another winter is upon us and copper pipes freeze and burst, builders can warm up to the fact that freeze-resistant Uponor PEX is guaranteed for 25 years and proven superior in the field for more than 30 years.



PEX FACTS PE-X pipes displace traditional steel and copper through lower installation and in-service costs (easier installation techniques, lower weight, less crack propagation) and long lasting reliability even in difficult installations and aggressive environment.



CON

TRACK WITH PEX

In 1990 the European Union sent all the member states a communication regarding the creation of a consistent rail transport network in the various States.

The document was called the "European High Speed Network Master Program". At an operative level this plan comprises 9,000 km of new lines with speeds of over 250 kph, the development of 15,000 km of existing lines to allow speeds of about 200 kph, and 1,200 km of various connecting tracks.

Each member country allocated funds and began to conform to the European Community suggestions. Very briefly, in order to do this, an ad hoc Company called TAV (Treno Alta Velocità, High-Speed Train) was formed in Italy to plan the new railway lines and to strengthen existing tracks that could be exploited.

We would like to consider one of these stretches of railway line to which DALPEX products were perfectly suited.

Given the extent of the work sites and the large number of workers employed, the infrastructure clearly had to be sized to meet the needs of the personnel. For the Turin-Milan line, the Dabegal di Cavriago Group (RE) created a series of prefabricated buildings to house the offices and personnel involved in the project for its duration.

One of the company managers, Mr. Comastri states that their success in this remarkably large project was due to the commitment of the firms with whom they collaborated in delivering the buildings within the times prescribed by the contract.

One of these firms was Termoidraulica Salvarani di Montecchio (RE) who, thanks to their employees and to the use of DALPEX products, managed to achieve excellent results in a very short time.

In Mr. Salvarani's words: "We provided all the water supply plant for the workers' dormitories. In each dormitory there are 20 bathrooms. From the dormitories we went on to the sick bay, changing rooms, offices, canteen, mapping studio and training room. We started work in March and finished everything in 5 months only."

On this stretch of track alone there were 260 workers' beds, plus another 60 for employees. This tiny community was able to benefit from the reliability and quality of the DALPEX products.

Some 5,000 metres of insulated and non-insulated LASER MULTI DALPEX tubing were used in completing this order. The diameters used went from 50 x 4 to 40 x 3.5 for the main trunks, leading to smaller diameters of 32 x 3, 26 x 3, 20 x 2 and 16 x 2 for all the branches.

For fittings, Termoidraulica Salvarani decided to use the push-fit system that guarantees tightness and above all a very speedy installation. About 10,000 DALPEX pressure fittings were used, and the result was excellent.

Mr. Salvarani continues: In addition to the quality of the materials used, the speed of installation was a determining factor in allowing us to do such a good job."

At this point we bid everyone "good work" and see you on the High-Speed Train.



FOR MORE INFORMATION ON PEX PRODUCTS VISIT OUR WEBSITE

www.pexassociation.com