PRESS RELEASE

British Plastics Federation PIPES GROUP

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BUILDING WATER SUPPLY AND HEATING IN PLASTIC PIPE SYSTEMS – REVIEWING BEST PRACTICE

By Owen Mace of the BPF Pipes Group

The construction sector faces a unique set of challenges, with aspects such as high prices, supply risk, skills shortages and sustainability. We are currently awaiting detailed government policy to help address some of the construction sector issues, such as an update of guidance (for example, approved documents) to support Building Regulations compliance.

In the meantime, now is an ideal moment to review current guidance and best practice. A range of documents is available on the BPF Pipes Group website to encourage best practice and to help specifiers, plumbers and installers keep up to date with the requirements as they currently stand. A summary of the relevant guidance documents is provided below – they can also be viewed and downloaded via this link… Building Services Guidance

SPECIFICATION GUIDANCE for *Pipes and Fittings for Hot and Cold Water Applications and Heating Inside Buildings*

The purpose of this short guide is to provide information on the specifications for plastic pipes and fittings for domestic hot and cold water supply and domestic heating systems inside a building. To purchase products suitable for the application and service conditions for which they have been designed, it is important to refer to the correct standard.

TECHNICAL GUIDANCE for *Domestic Hot and Cold Water Supply and Central Heating Systems*

An update of the 2022 *Domestic hot and cold water supply and central heating systems* guidance is now available, with issue 5 now obtainable here Technical Guidance for Hot and Cold Water Supply, and Central Heating. This revised technical guidance is a comprehensive document covering different systems, pipes, fittings and their advantages, along with UK service conditions and codes for design, installation and commissioning. It also covers connecting pipework to other systems such as heat generators and relief valves, correct routing, laying, protection, testing and commissioning, and a useful reference summary.

TECHNICAL GUIDANCE for *Discharge from Unvented Hot Water Storage Cylinders into Plastic Sanitary Pipework Systems*

The purpose of this short guide is to draw attention to discharge from unvented cylinders and the opportunity to use plastic pipework through good design and installation.

POSITION STATEMENT on *Plastic Piping Systems and Water Fittings Regulations/Byelaws*

Any water fitting installed or used in premises, including plastic pipe systems, which is supplied by a water undertaker (for human consumption/drinking water), is subject to Water Fittings regulations. The purpose of these regulations is to protect public health and to prevent waste and mis-use of the public water supply. Pipes and fittings need to comply with Regulation 4 of the regulations, which is explained in this position statement, which can be viewed and downloaded using the link Water Fittings Regulations / Byelaws

Benefits of plastic piping systems in hot/cold supply and heating applications

Mitigating supply risk is always a factor but the manufacture and distribution of plastic piping systems in the UK is very strong. This is reassuring during periods of uncertain supply and the availability of construction products due to global factors.

Plastic pipe systems have been widely used in domestic hot and cold water supply and central heating systems for over 50 years, so are not a 'new' solution; they have an excellent track record in water supply and heating applications generally. In terms of skills, plastic piping systems require no torch installation and their flexibility aids handling and installation. Available in straight lengths and coils, they can be threaded around obstructions and through joists, reducing the number of joints required and hence also reducing the potential for leaks. Where joints are needed, an extensive range of fittings is available, enabling reliable, watertight joints.

Plastic piping systems require no naked flame installation which is a health and safety plus point. The popular BS 7291 Class S products, which are suitable for domestic hot and cold water and heating systems, cover high system operating and malfunction temperatures. For potable water, health and safety is assured through testing and certification of products to demonstrate compliance with Regulation 4 of the Water Fitting Regulations.

Plastic pipe systems support sustainable construction. Operationally, plastic piping system contribute to sustainability, including through lower thermal losses (e.g. district heating and domestic hot water supply applications), and through suitability for underfloor heating arrays, the efficient heat emitter of choice for low carbon heating systems. When comparing the GHG emissions of PEX pipes versus copper, PEX has a lower thermal conductivity than copper. It is estimated that GHG emissions from incremental heat loss are about 35 per cent higher in copper pipes than PEX pipes in a 261m^2 home with most water use for a family of four concentrated in the mornings and evenings.*

Looking to the future

When starting a new project, it is worthwhile taking stock of all construction guidance relevant to your work to ensure you are meeting regulations, exercising

due diligence for the benefit of the occupants of the properties you build and work on, and for your business.

Ultimately, as far as any hot and cold water and heating systems in buildings are concerned, there is an essential need for leak-tight systems that protect drinking water quality, efficiently transport heat, and that are installed correctly so as to last for many years without any issues.

The BPF Pipes Group is part of the British Plastics Federation and the leading trade federation of the UK plastic piping systems industry. Committed to sustainable construction, its aims are to provide a forum for the exchange of technical expertise between member companies and to promote the importance of plastic as a pipework material, for the full spectrum of above and below ground, pressure and non-pressure applications.

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* McKinsey & Company Report July 2022

PHOTO-CAPTION 1: Owen Mace, BPF Pipes Group

PHOTO-CAPTION 2: Some of the guidance documents from the BPF Pipes Group

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About the BPF Pipes Group

Part of the British Plastics Federation, the BPF Pipes Group is a trade association representing manufacturers of plastic piping systems across the UK. Committed to sustainable construction, its aims are to provide a forum for the exchange of technical expertise between member companies and to promote the importance of plastic as a pipework material, for the full spectrum of above and below ground, pressure and non-pressure applications. It also plays a key role in initiating and disseminating research and contributes to the work of standards bodies pertaining to plastic pipe systems. It works closely with the BPF and TEPPFA, the European Plastic Pipes and Fittings Association.