

PE-X Standards for Pressure Pipe Applications

European and International Standards for PE-X Pipe

EN ISO 15875 Plastics piping systems for hot and cold water installations – Cross-linked polyethylene (PE-X)

- Part 1 General
- Part 2 Pipes
- Part 3 Fittings
- Part 5 Fitness for purpose
- CEN ISO TS Part 7 Guidance for assessment of conformity

Status – published (2003), due for confirmation or revision in 2008.

ISO 14531 Plastics pipes and fitting – Crosslinked polyethylene (PE-X) pipe systems for the conveyance of gaseous fuels – Metric series – Specifications

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| - Part 1 Pipes | (Published 2003) |
| - Part 2 Fittings for heat fusions jointing | (Published 2004) |
| - Part 3 Mechanical fittings | (Published 2006) |
| - Part 4 Guidance for design and installation | (Published 2006) |

Status – All parts published

EN 1264 Floor heating - Systems and components.

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| - Part 1 Definitions and symbols | (Published 1998) |
| - Part 2 Determination of the thermal output | (Published 1998) |
| - Part 3 Dimensioning | (Published 1998) |
| - Part 4 Installation | (Published 2001) |

Status – currently in revision

CEN/TC 107 WI 107019 District heating pipes – Pre-insulated flexible pipe systems; requirements and test methods

- Part 1: General requirements and test methods
- Part 2 Plastics medium pipes, bonded
- Part 3 Plastics medium pipes, non bonded
- Part 4 Metallic medium pipes, bonded
- Part 5 Metallic medium pipes, non bonded

Status – passed prEN vote in 2007 under development for next stage.

National Standards

UK - BSi

BS 7291-1 Thermoplastics pipes and associated fittings for hot and cold water for domestic purposes and heating installations in buildings. General requirements

BS 7291-3 Thermoplastics pipes and associated fittings for hot and cold water for domestic purposes and heating installations in buildings. Specification for cross-linked polyethylene (PE-X) pipes and associated fittings

Status – Published (2001)

German – DIN

DIN 16892 Pipes made from crosslinked PE (PEX) – General requirements, testing

DIN 16893 Pipes made from crosslinked PE (PEX) – Dimensions

Status – published (2000)

DIN 16895 Crosslinked medium density polyethylene (PE-MDX) pipes - Dimensions

Status – Published (1996)

DIN 4726 Warm water floor heating systems and radiator pipe connecting - Piping of plastic materials

Status – published (2000)

USA – ASTM

F876-04 Standard Specification for Crosslinked Polyethylene (PEX) Tubing

F877-05 Standard Specification for Crosslinked Polyethylene (PEX) Hot and Cold water Distribution Systems

F1281-03 Standard Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe

F1282-03 Standard Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe

Status – All published

ISO Product Standards with PE-X Option

ISO 17484 Plastics piping systems. Multi-layered pipe systems for indoor gas installations with a maximum operating pressure up to and including 5 bar

- Part 1~ Specifications for systems
- Part 2 – Code of practice

Status – Part 1 – published 2007, Part 2 at DIS stage.

ISO 18225 Multilayer piping systems for outdoor gas installations – Specifications for systems

Status – published in 2007

ISO TS 18226 Reinforced thermoplastics pipes for high pressure gas applications

Status – published 2006

ISO 21004 Plastics piping systems – Multilayer pipes and their joints, based on thermoplastics, for water supply (Outdoors)

Status – published in 2006

ISO 21003 Plastics piping systems - Multilayer piping systems for hot and cold water installations inside buildings

- Part 1 - General
- Part 2 - Pipes.
- Part 3 - Fittings.
- Part 5 - Fitness for purpose of the system.

Status – Passed DIS vote, in preparation for final vote

Specific Test methods and specifications

ISO 10147 Plastics pipes and fitting made of crosslinked polyethylene (PE-X) – Estimation of the degree of crosslinking by determination of the gel content

EN 579 Plastics piping systems - Crosslinked polyethylene Determination of degree of crosslinking by solvent extraction

ISO 10146 Crosslinked polyethylene (PE-X) pipes – Effect of time and temperature on the expected strength

ISO 10508 Plastics piping systems for hot and cold water installation – Guidance for classification and design

ISO 11357-6 Oxidation induction time

ISO TR 10837 Oxidation induction time

EN 728 Oxidation induction time

NB: the above two methods are to be withdrawn when ISO 11357-6 is adopted by product standards as these are revised.

ISO 1167-1/2/3/4 Pipe, fitting and assembly pressure tests

EN 921 Pipe pressure test method

NB: This standard is being withdrawn as product standards are revised, which will reference ISO 1167 in future.