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Plastics pipes and fittings — Crosslinked polyethylene (PE-X) pipe systems for the conveyance of gaseous fuels — Metric series — Specifications —

Part 1: Pipes

Tubes et raccords en matières plastiques — Systèmes de tubes en polyéthylène réticulé (PE-X) pour le transport de combustibles gazeux — Série métrique — Spécifications —

Partie 1: Tubes



Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 14531 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 14531-1 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 4, *Plastics pipes and fittings for the supply of gaseous fuels*.

ISO 14531 consists of the following parts, under the general title *Plastics pipes and fittings — Crosslinked polyethylene (PE-X) pipe systems for the conveyance of gaseous fuels — Metric series — Specifications*:

- *Part 1: Pipes*
- *Part 2: Fittings for heat-fusion jointing*
- *Part 3: Fittings for mechanical jointing (including PE-X/metal transitions)*
- *Part 4: System design and installation guidelines*

Annexes B, C and D form a normative part of this part of ISO 14531. Annexes A and E are for information only.

The inclusion of annex E is an interim measure. The content of annex E is also incorporated in ISO 14531-4, the system design and installation guide. Annex E will be deleted from this part of ISO 14531 as soon as ISO 14531-4 is available as a draft International Standard (DIS).

In this corrected version of ISO 14531-1:2002, Table 7 (page 12) has been amended in two places:

- the requirement for elongation at break has been corrected from " ≤ 350 " to " ≥ 350 ";
- the test method for squeeze-off properties has been corrected from "Annex C" to "Annex D".

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Introduction

Further to the publication of International Standards for crosslinked polyethylene (PE-X) hot-water pipes, it has become evident that the properties of PE-X, in particular its high fracture resistance and its socket and saddle fusion-jointing capability, render it suitable for use in high-performance gas-distribution systems. The philosophy of ISO 14531 is to provide the platform for the introduction of PE-X gas pipe systems by embracing a performance envelope beyond that covered by existing PE standards, whilst taking its application into regimes of higher operating pressure and extremes of operating temperature.

ISO 14531-1 is therefore one part of a four-part system standard covering pipes, fittings for heat-fusion jointing, fittings for mechanical jointing and design and installation guidelines. The content is suitable for use by procurement authorities and distribution engineers responsible for the design, installation and operation of pipeline systems.