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Reconfirmed 2017

AS ISO 6993.1—2007

Australian Standard®

Buried, high-impact poly(vinyl chloride) (PVC-HI) piping systems for the supply of gaseous fuels

Part 1: Pipes for a maximum operating pressure of 1 bar (100 kPa) (ISO 6993-1:2006, MOD)



This Australian Standard® was prepared by Committee PL-021, PVC, ABS and Polyamide Pipe Systems. It was approved on behalf of the Council of Standards Australia on 9 March 2007.
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The following are represented on Committee PL-021:

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- CSIRO Manufacturing and Materials Technology
- Certification Interests
- Energy Networks Association
- Engineers Australia
- Local Government New Zealand
- Master Plumbers, Gasfitters and Drainlayers New Zealand
- New Zealand Water and Waste Association
- Plastic Industry Pipe Association of Australia
- Plastics New Zealand
- Water Services Association of Australia

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STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS ISO 6993.1—2007
Buried, high-impact poly(vinyl chloride) (PVC-HI) piping systems for the supply of gaseous fuels
Part 1: Pipes for a maximum operating pressure of 1 bar (100 kPa) (ISO 6993-1:2006, MOD)

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NOTES

Australian Standard®

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Part 1: Pipes for a maximum operating pressure of 1 bar (100 kPa) (ISO 6993-1:2006, MOD)

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PREFACE

This Standard was prepared by Standards Australia's Committee PL-021, PVC, ABS and Polyamid Pipe Systems to supersede (in part) the AS 1464 series of Standards *Plastics pipes and fittings for gas reticulation—Unplasticized PVC (UPVC)*.

The objective of this revision is to adopt the ISO 6993 series of Standards, *Buried, high-impact poly (vinyl chloride) (PVC-HI) piping systems for the supply of gaseous fuels.*

This Standard is an adoption with national modifications and has been reproduced from ISO 6993-1:2006 *Buried, high-impact poly (vinyl chloride)(PVC-HI) piping systems for the supply of gaseous fuels*—Part 1: *Pipes for a maximum operating pressure of 1 bar (100 kPa)*. The Australian modifications to the ISO Standard are incorporated in Appendix ZZ to the Standard.

The other parts in this series of Australian Standards are the following:

AS ISO 6993		*Buried, high-impact poly (vinyl chloride) (PVC-HI) piping systems for the supply of gaseous fuels*
AS ISO 6993.2	Part 2:	*Fittings for a maximum operating pressure of 200 mbar (20 kPa)* (adoption of ISO 6993-2:2006)
AS ISO 6993.3	Part 3:	*Fittings and saddles for a maximum operating pressure of 1 bar (100 kPa)* (adoption of ISO 6993-3:2006)

NOTE: ISO 6993-4:2006, *Buried, high impact poly (vinyl chloride) (PVC-HI) piping systems for the supply of gaseous fuels,* Part 4*: Code of practice for design, handling and installation* has not been adopted in this series of Australian Standards. The subject is covered by other existing Australian Standards, particularly AS 3723, *Installation and maintenance of plastic pipe systems for gas* and AS 5601 *Gas installations*.

As this Standard is reproduced from an international standard, the following applies:

(a) Its number appears on the cover and title page while the international standard number appears only on the cover

(b) In the source text ‘ISO 6993-1’ should read ‘AS 6993.1’.

(c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard ISO		Australian/New Zealand Standard AS/NZS	
2507-1	Thermoplastics pipes and fittings—Vicat softening temperature Part 1: General test method	1462.5	Methods of test for plastics pipes and fittings Method 1: Vicat softening temperature
3126	Plastics piping systems—Plastics components—Determination of dimensions	1462.1	Methods of test for plastics pipes and fittings Method 2: Method for determining the dimensions of pipes and fittings

9080	Plastics piping and ducting systems—Determination of the long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation	1462.29	Methods of test for plastics pipes and fittings—Plastics piping and ducting systems Method 29: Determination of the long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation (ISO 9080:2003, MOD)

The terms ‘normative’ and ‘informative’ are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

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STANDARDS AUSTRALIA

Buried, high-impact poly(vinyl chloride) (PVC-HI) piping systems for the supply of gaseous fuels—Part 1: Pipes for a maximum operating pressure of 1 bar (100 kPa) (ISO 6993-1:2006, MOD)

1 Scope

This part of ISO 6993 specifies the requirements for pipes made of high-impact poly(vinyl chloride) (PVC-HI) intended to be used for the supply of gaseous fuels through buried pipelines having an operating temperature range of 0 °C up to and including +30 °C and a maximum operating pressure of 1 bar (100 kPa) [1)].

It is applicable only to pipes manufactured from the high-impact PVC materials PVC-A, PVC-CPE and PVC-EPR. The pipes are suitable for those gases not containing potentially damaging components in such concentrations as to impair the properties of the pipe material.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1167-1:2006, *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure — Part 1: General method*

ISO 2505:2005, *Thermoplastics pipes — Longitudinal reversion — Test method and parameters*

ISO 2507-1, *Thermoplastics pipes and fittings — Vicat softening temperature — Part 1: General test method*

ISO 2507-2, *Thermoplastics pipes and fittings — Vicat softening temperature — Part 2: Test conditions for unplasticized poly(vinyl chloride) (PVC-U) or chlorinated poly(vinyl chloride) (PVC-C) pipes and fittings and for high impact resistance poly(vinyl chloride) (PVC-HI) pipes*

ISO 3126, *Plastics piping systems — Plastics components — Determination of dimensions*

ISO 3127, *Thermoplastics pipes — Determination of resistance to external blows — Round-the-clock method*

ISO 9080, *Plastics piping and ducting systems — Determination of the long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation*

ISO 9852, *Unplasticized poly(vinyl chloride) (PVC-U) pipes — Dichloromethane resistance at specified temperature (DCMT) — Test method*

ISO 9969, *Thermoplastics pipes — Determination of ring stiffness*

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1) 1 bar = 0,1 MPa = 10^5 Pa; 1 MPa = 1 N/mm^2

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